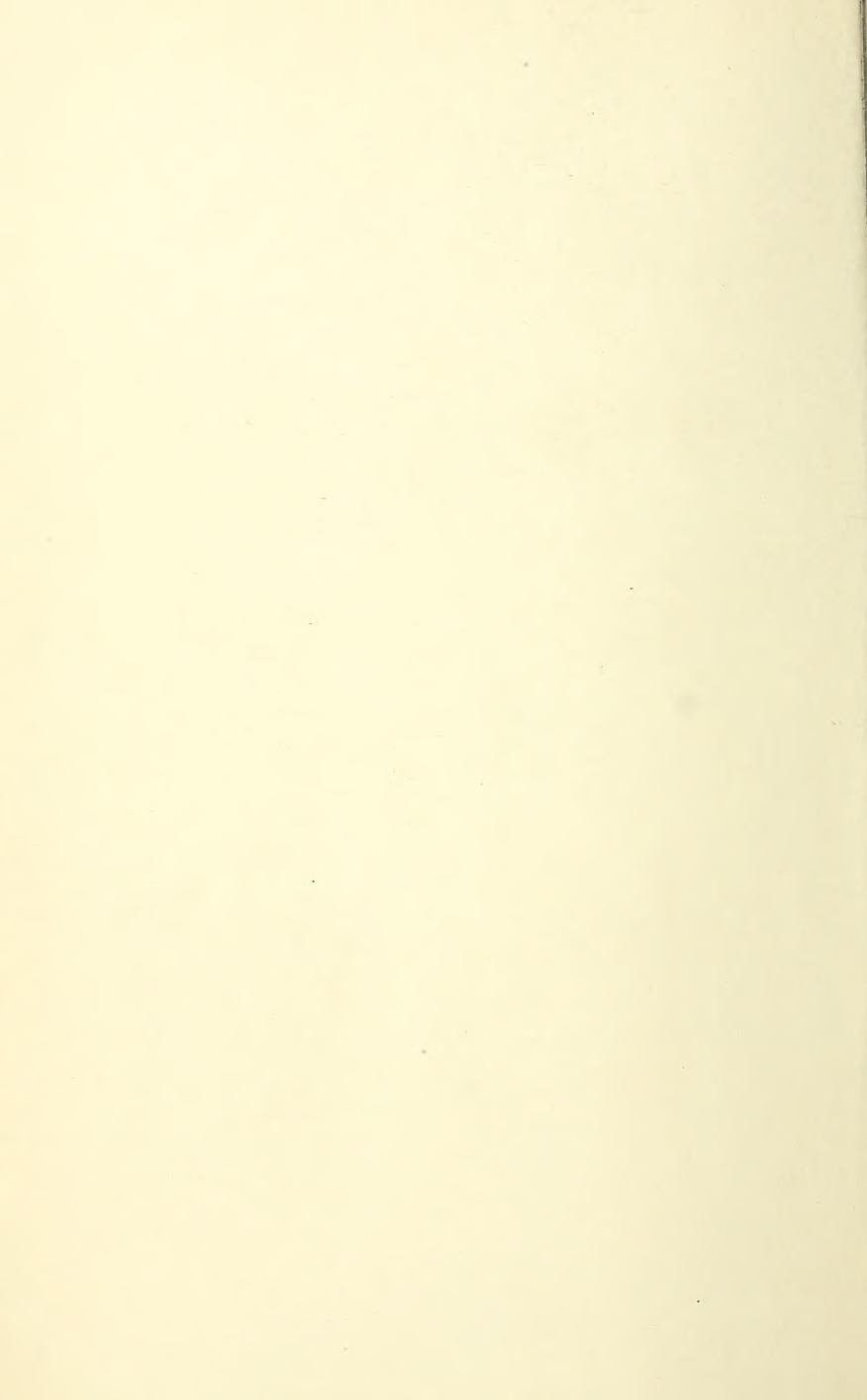


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HAND-BOOK

OF THE

AMERICAN ECONOMIC

ASSOCIATION,

1896.



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AMERICAN ECONOMIC ASSOCIATION.

During the eleven years of its existence the American Economic Association has adhered closely to its original purpose of encouraging the scientific study of economic and social problems, and of diffusing knowledge regarding them. In its ten annual volumes of monographs will be found much of the newest thought of the leading economists of the country on the important questions of the day, as well as upon economic theory. The Association belongs to no school, but persons of all shades of opinion on economic subjects are found among its members, the specialists as well as very many persons who, in addition to their interest in business life, take also an interest in economic investigations.

With its twelfth year of work the Association takes up a new line of publications. It has been determined to issue a series of popular economic studies, in which shall be treated in brief form, but with an impartial spirit, the leading questions of the day. These brief articles, it is hoped, will have a wider circulation than the longer scientific monographs, and will thus be of more service in informing the public and in stimulating its interest in economic work. It is not the intention, however, to cease the publication of the scientific monographs; but they will appear hereafter at irregular intervals as material of the right quality is offered. It is

hoped that the Association will be able even more often than before to publish works of merit that from their strictly scientific character may be unable to find private publishers. Members of the Association will, therefore, understand that in paying their membership fees they are not only receiving in the publications a full equivalent, but that in addition they are making possible the diffusion of results of careful scientific study that might not otherwise reach the light.

While the Association stands to-day in a better condition, perhaps, than ever before, numbering in its roll of members, with very few exceptions, the names of all recognized authorities on economic questions in the country, besides hundreds of persons who, though they have not made a specialty of economics, have still a deep interest in economic problems, it still needs further means in order to continue and expand its work. Efforts should be made by all its members to extend the membership list ; and the Association will gladly take charge of any funds or prizes that interested persons may wish to offer for special work. Prizes for the best essays on important topics furnish valuable means of stimulating research.

The Association has heretofore been able to secure for its members valuable pamphlets distributed by the government or by individuals who wished to put the results of experiments or research into the hands of persons most likely to make good use of them.

The last annual meeting, held at Indianapolis, was one of the best in the history of the Association. The

discussion on the monetary question of the day proved of very unusual interest ; and the members of the Association, perhaps better than at any previous meeting, availed themselves of the opportunity for extending their acquaintance among those interested in economic questions.

Any person may become a member of the Association upon application to the Secretary. The membership fee is three dollars a year ; life membership fifty dollars. Members are entitled to all the publications of the Association, and receive also a discount of one-sixth on any back numbers or volumes of the publications which they may wish to purchase. Libraries and other institutions may receive all the publications by paying an annual subscription of four dollars, or may receive the new *Studies* upon payment of two and one-half dollars annually.

CONSTITUTION.

ARTICLE I.

NAME.

This Society shall be known as the AMERICAN ECONOMIC ASSOCIATION.

ARTICLE II.

OBJECTS.

1. The encouragement of economic research, especially the historical and statistical study of the actual conditions of industrial life.

2. The publication of economic monographs.

3. The encouragement of perfect freedom of economic discussion. The Association, as such, will take no partisan attitude, nor will it commit its members to any position on practical economic questions.

4. The establishment of a bureau of information designed to aid members in their economic studies.

ARTICLE III.

MEMBERSHIP.

Any person may become a member of this Association by paying three dollars, and after the first year may continue a member by paying an annual fee of three dollars.

On payment of fifty dollars any person may become a life member, exempt from annual dues.*

ARTICLE IV.

HONORARY MEMBERS.

The Council may elect foreign economists of distinction, not exceeding twenty-five in number, honorary members of the Association. Each honorary member shall be entitled to receive all reports and publications of the Association.

ARTICLE V.

OFFICERS.

The officers of the society shall consist of a President, three Vice-Presidents, a Secretary, a Treasurer, a Publication Committee and a Council.

ARTICLE VI.

COUNCIL.

1. The Council shall consist of an indefinite number of members of the society, chosen, with the exception of the original members, for three years. It shall have power to fill all vacancies in its membership, and may add to its number.

2. It shall elect the President, Vice-Presidents, Secretary and Treasurer, which officers, with the Chairman of the Publication Committee, shall constitute an Execu-

* NOTE.—Each member shall be entitled to receive all reports and publications of the Association.

tive Committee with such power as the Council may entrust to it.

3. The Council shall organize itself into a number of standing committees upon the various lines of research undertaken. These committees shall prepare reports from time to time upon such subjects relating to their respective departments as they may select, or as may be referred to them by the Council. These reports shall be presented to the Council at its regular or special meetings and be open to discussion. All papers offered to the society shall be referred to the appropriate committees before being read in the Council.

4. The Council shall have charge of the general interests of the society, and shall have power to call meetings and determine what reports, papers, or discussions are to be printed, and may adopt any rules or regulations for the conduct of its business not inconsistent with this constitution.

5. The Council shall elect a Committee on Publications, which shall consist of six members, so classed that after the first election the term of two members shall expire each year. This committee shall have charge of and responsibility for the scientific publications of the Association.

ARTICLE VII.

AMENDMENTS.

Amendments, after having been approved by a majority of the Council, may be adopted by a majority vote of the members present at any regular meeting of the Association.

BY-LAWS.

1. The President of the Association, who shall be *ex-officio* a member of the Council, shall preside at all meetings of the Council and Association, and perform such other duties as may be assigned to him by the Council. In case of inability to perform his duties, they shall devolve upon the Vice-Presidents in the order of their election, upon the Secretary and Treasurer, and upon the Chairmen of the Standing Committees, in the order in which the committees are mentioned in the list.

2. The Secretary shall keep the records of the Association, and perform such other duties as the Council may assign to him.

3. The Treasurer shall receive and have the custody of the funds of the Association, subject to the rules of the Council.

4. The following Standing Committees shall be organized :

- (1). On Labor.
- (2). On Transportation.
- (3). On Trade.
- (4). On Public Finance.
- (5). On Industrial and Technical Education.
- (6). On Exchange.
- (7). On General Questions of Economic Theory.
- (8). On Statistics.
- (9). On Teaching Political Economy.

The Executive Committee may appoint such special committees as it may deem best.

5. At any meeting called by the general summons of the President, five members shall constitute a quorum.

6. Papers offered for the consideration of the Council shall be referred by the Secretary, each to its appropriate committee.

7. In order to encourage economic research, the Association proposes to render pecuniary assistance in the prosecution of the same, and to offer prizes for the best monographs upon selected topics. It stands ready to accept and administer any fund placed at its disposal for either purpose.

8. The Executive Committee shall have power at any time to add new members to the Council.

9. The Executive Committee shall assign all members of the Council to one of the Standing Committees, and shall appoint the Chairmen of the Committees.

10. It shall be the duty of the Chairmen of the respective Committees to organize and direct the work of the same, under the general control of the Council.

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* Died April 13, 1890.

† Died January 3, 1892.

‡ Died April 19, 1885.

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The
Eighth Annual Meeting

THE EIGHTH ANNUAL MEETING.

The Eighth Annual Meeting of the American Economic Association was held in the senate chamber of the State House at Indianapolis, Ind., December 27-31, 1895. On the last day of the meeting a joint session was held with the Political Science Association of the Central States, which continued its special sessions two days longer. The attendance was unusually large, and some of the discussions were of great interest. The following program had been prepared, and was carried out with slight changes which appear in the report:

FRIDAY, DECEMBER 27.

Evening Session, 8 p. m.

- I. Address of Welcome, by GOVERNOR MATTHEWS.
 - II. Response by the President of the Association.
 - III. President's Annual Address: "The Theory of Economic Progress." PROFESSOR JOHN B. CLARK, Columbia College.
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SATURDAY, DECEMBER 28.

Morning Session, 10 a. m.

Symposium.—The Relation of Changes in the Volume of the Currency to Prosperity.

Papers by PROFESSOR IRVING FISHER, Yale University, and PRESIDENT FRANCIS A. WALKER, Massachusetts Institute of Technology. Brief addresses by PROFESSORS WILLARD FISHER and EDWARD A. ROSS.

Afternoon Session, 3 p. m.

Symposium.—The Practicability and Desirability for the Commercial World of a Double Standard of Currency.

Papers by GENERAL A. J. WARNER, President of the American Bimetallic League, and PROFESSOR F. W. TAUSSIG, Harvard University. Brief addresses by PROFESSORS W. A. SCOTT, H. W. FARNAM, SIDNEY SHERWOOD, and JOHN H. GRAY.

MONDAY, DECEMBER 30.

Morning Session, 10 a. m.

I. Do We Want an Elastic Currency?

PROFESSOR F. M. TAYLOR, University of Michigan.

II. The Desirability of a Permanent Census Bureau.

PROFESSOR RICHMOND MAYO-SMITH, Columbia College.

III. The Density of Population in the United States in 1890.

PROFESSOR WALTER F. WILLCOX, Cornell University.

Afternoon Session, 3 p. m.

I. Some Unpublished Letters of David Ricardo.

DR. J. H. HOLLANDER, Johns Hopkins University.

II. The Formulation of Normal Laws with Especial Reference to the Theory of Utility.

PROFESSOR SIMON N. PATTEN, University of Pennsylvania.

III. Pawn Shops and Their Work in Cincinnati.

H. A. MILLIS, Fellow in Economics, Indiana State University.

IV. The Fallacy of Saving.

DR. H. R. SEAGER, University of Pennsylvania.

*Joint session with the Political Science Association of
the Central States.*

TUESDAY, DECEMBER 31.

Morning Session, 10 a. m.

Cost, Singular and Plural.

PROFESSOR W. G. LANGWORTHY TAYLOR, University of Nebraska.

Symposium.—The Sphere of Voluntary Organization in Social Movements.

Papers by PROFESSOR F. H. GIDDINGS, Columbia College, (A. E. A.), and PROFESSOR C. R. HENDERSON, University of Chicago, (P. S. A.). The discussion will be participated in by PROFESSOR LESTER F. WARD and PROFESSOR H. H. POWERS, for the Economic Association, and PROFESSOR GRAHAM TAYLOR, HON. WILLIAM D. FOULKE, and PRESIDENT J. H. FINLEY, for the Political Science Association.

Afternoon Session, 2:30 p. m.

Symposium.—Present Obstacles to the Adoption of Business Methods in Municipal Administration.

Papers by HON. FRANKLIN MCVEAGH, Chicago, Ill., (P. S. A.), and CLINTON ROGERS WOODRUFF, Secretary of the National Municipal League (A. E. A.). The discussion will be participated in, it is expected, by DR. WASHINGTON GLADDEN and PROFESSOR JOHN H. GRAY, for the Political Science Association, and PROFESSOR J. W. JENKS, PROFESSOR J. R. COMMONS, and DR. E. W. BEMIS, for the American Economic Association.

The address of welcome and the response by the President are given in full on the following pages. The annual address of the President and the address of ex-President Francis A. Walker were printed in the first number of the *Economic Studies*. It is probable that some of the other papers given will be printed by the Association. Abstracts of the papers and discussions are given on the following pages.

COUNCIL MEETINGS.

Two meetings of the Council of the Association were held, with President John B. Clark in the chair. The most important actions taken, which will be of general interest to the members, are the following :

An amendment to the Constitution, making the Publication Committee to consist of six members, the terms of two to expire each year, was adopted.

It was decided that the monographs should hereafter be issued, not at regular intervals, but in such numbers and at such times as the Publication Committee shall deem expedient. In addition to the monographs the Association is to issue a series of short Studies, original or reprinted, not less than six a year nor more than twelve, in which practical questions shall be scientifically discussed.

The Executive Committee was empowered to appropriate the sums necessary to defray the expenses of the offices of the Secretary, Treasurer, and Publication Committee.

The following resolutions were passed as a result of the discussion on the question of a Permanent Census Bureau :

1. That the American Economic Association expresses its sympathy with all efforts to improve census methods in the United States ; and that the President appoint a committee to promote, if possible, an effective coöperation with the United States authorities in the plans and methods of future census operations.

2. That the American Statistical Association be invited to appoint a like committee to act with the committee of the American Economic Association.

The following officers were elected for the ensuing year :

President, Henry C. Adams, Ph.D., University of

Michigan; Vice-Presidents: Franklin H. Giddings, M.A., Columbia College; E. R. L. Gould, Ph.D., Johns Hopkins University and the University of Chicago; Roland P. Falkner, Ph.D., University of Pennsylvania; Secretary, Jeremiah W. Jenks, Ph.D., Cornell University; Treasurer, Charles H. Hull, Ph.D., Cornell University; Publication Committee: F. W. Taussig, Ph.D., Harvard University, Chairman; Sidney Sherwood, Ph.D., Johns Hopkins University; John Graham Brooks, Cambridge, Mass.; H. H. Powers, A.M., Stanford University; Davis R. Dewey, Ph.D., Massachusetts Institute of Technology; W. A. Scott, Ph.D., University of Wisconsin.

The following gentlemen were added to the Council:

Francis A. Walker, LL.D., Massachusetts Institute of Technology; John Cummings, Ph.D., Harvard University; Frederick C. Clark, Ph.D., Ohio State University; Edward A. Ross, Ph.D., Stanford University; W. A. Scott, Ph.D., University of Wisconsin; W. F. Willcox, Ph.D., Cornell University; F. W. Moore, Ph.D., Vanderbilt University; Francis Walker, Ph.D., Colorado College; John F. Crowell, Ph.D., Smith College; J. W. Crook, Ph.D., Amherst College; Irving Fisher, Ph.D., Yale University; Willard Fisher, Ph.D., Wesleyan University; John J. McNulty, Ph.D., College of the City of New York; Charles J. Bullock, Ph.D., Cornell University; Edward Cummings, Ph.D., Cambridge, Mass.

REPORT OF THE SECRETARY.

The year just closed has been a prosperous one so far as the membership list and the business of the association are concerned. The results for the membership may be summarized as follows :

Life members,	Lost by deaths,	2
Additions,		1
Total number at present,		71
Honorary members,	Lost by deaths,	none.
Additions,		none.
Total number at present,		16
Regular members,	Number lost during year,	34
Additions,		62
Gain,		28
Total number at present,		485
Subscribers,	Number lost during year,	7
Additions,		1
Total number at present,		80
Total number subscribers and members,		652

A number of changes have been made in the business arrangements of the Association. Acting under the instructions of the Council the Secretary made an arrangement with Macmillan & Co. of New York, by which they became the publishers of the Association. Under this arrangement Macmillan & Co. undertook all the business of the sales of the publications and of collecting subscriptions. Regular dealings with the members are left with the Secretary and Treasurer. The change has made it possible to reduce materially the expenses of the Secretary's office.

Judging from the experience of the last few months, this arrangement will give the publications of the Asso-

ciation a somewhat wider circulation; and the convenience and standing of the Association will be furthered by having a permanent publisher in New York. Probably there will be also a slight increase in the income of the Association.

It seemed wise also to the Executive Committee to make a change in the printers of the Association. Accordingly a contract was made with Andrus & Church of Ithaca, who offered somewhat lower terms than it was possible to obtain elsewhere. The location of the printers has been convenient for the Secretary and the assistant of the Publication Committee who has had charge of the first reading of the proofs, and the work has been done more promptly, more easily and better than before.

The change in the publishing office, however, made it necessary to re-enter our publications with the Post Office Department at Washington; and under the later rulings of that department it has been impossible to enter our publications as second class matter unless we give up the publication of double numbers. The rules require that publications be issued at regular intervals; so that we must publish either four or six regular numbers each year. Owing to the nature of the material we have had on hand we have been unable to issue the numbers regularly, and have therefore been obliged to pay third class rates, thus adding to our mailing expense probably \$150.

The Publication Committee have also found it necessary to print more matter this year than usual; so that the expense for printing is also larger. The original plan was

to print some 500 pages a year. Our single monograph on Canadian Banking, comprising numbers 1, 2, 3 of Volume 10, contained some 476 pages. We have already printed (including the Hand-Book and Report of the Seventh Annual Meeting, containing 138 pages) 749 pages, and must still print, to complete our volume for the year, one double number. On the whole, we shall probably print 900 pages. While the monographs printed have been valuable, and while the one on the Canadian Banking System has sold well, especially in bound form, it still seems desirable from the standpoint of the Secretary, not to print so large monographs.

Again, one must not overlook the difficulty of procuring desirable material for publication. Since so many regular economic publications have been started in this country a market has been found for many of the most valuable contributions, and many of our best writers even among our younger members have been under more or less obligation to print elsewhere. It seems desirable that the Council take into consideration our publications, with reference to the provision of suitable material.

TREASURER'S REPORT.

F. B. HAWLEY, Treasurer,

*In account with the American Economic Association
for the year ending Dec. 23, 1895.**Debits.*

Cash on hand as per last report	\$1465 53
Subscriptions and sales, Secretary's office	848 88
" " " Macmillan & Co.	631 77
Contributions	17 00
Life membership	50 00
Annual dues	1203 00
	<hr/>
	4216 18

Credits.

Expenses of Secretary's office	753 68
Expenses of Treasurer's office	88 75
Publication Expenses	1833 87
	<hr/>
	2676 30
Cash in hands of Secretary Dec. 23	18 14
" " Treasurer " "	1521 74
	<hr/>
	4216 18

ADDRESS OF WELCOME.

BY GOVERNOR MATTHEWS OF INDIANA.

Gentlemen of the American Economic Association :

It gives me profound gratification to have this opportunity to-night to welcome you to our state and to its capital city. To have great educators, men of thought, of letters, and of science, turn their footsteps towards our hospitable and appreciative borders, is in truth but history repeating itself, and is only in keeping with the march which began in the early infancy of our statehood. For there was a time, gentlemen, and quite a long time, too, when the best known—I may say, the most favorably known—spot in all the country west of the Alleghanies, a spot known to the world of speculative thought, of higher intelligence, of broad investigation and comprehensive science, was in Indiana—in Posey county, Indiana, the home and the resting place of Robert Dale Owen and his co-laborers. It was there that the great strong minds of the old and the new world at that time gathered and communed, with high aim, noble resolve, and unselfish study and research into problems of social and material science, and evolved ideas, theories, and political good which left their impress upon a people—influences which yet are felt and which more than any one thing did their work in placing Indiana well to the front in all matters of great and true reforms, reforms which were to meet the constant and

rapidly growing demands of an advancing civilization. While we, gentlemen, would welcome you to-night as guests, we would also welcome you as students of problems, social, political, and economic, which, I am proud to say, we as a state have earnestly studied and more than partially solved. During your stay with us, we would invite your attention to the justice and the equity of the laws upon the statutes of Indiana. We would also ask you to consider the great system of state charities, and especially that system of organized charity in this city—and I do not speak boastingly—which has not its superior in any city of the land. We would also ask your attention to the public school system of our state, an educational system which long has been the admiration and the pattern for other states coming into the Union after its adoption in Indiana. But, Mr. President, I will not undertake to enumerate all the good things we possess, for fear that I may be charged with the spirit of boasting. I am glad to say, gentlemen, that we welcome you most for yourselves, for your worth as educators in the fields of higher advanced thought, as men who, while you cannot directly mingle in nor administer public affairs, yet are moulders of thought and creators of influences just as surely, and who even in the quiet of your studies, shape the destiny of a people and their government.

I do not come before you to-night, rejoicing as I do in your meeting in our midst, with any expectation of or preparation for an address. We know that we ourselves will derive much of pleasure and instruction through

the consideration and discussion of the questions which will engage your attention during your meeting here, and we sincerely hope that you yourselves may find your stay with us useful and of that agreeable character, giving to you pleasant memories to carry away with you, that may again at some time tempt you to return to us. I, gentlemen, members of the American Economic Association, most cordially and heartily welcome you to Indiana.

RESPONSE TO THE ADDRESS OF WELCOME, BY PRESIDENT JOHN B. CLARK.

It is my pleasant privilege to express what we all feel, a grateful appreciation of the kindly words of welcome which the Governor of the State has extended to us. It is not unknown to us that, in early times and in recent times, economic thought has been largely indebted to the State of Indiana; and it is with peculiar pleasure that we come here for a meeting that in itself has one noteworthy feature, namely, that it is the decennial of our association. Ten years ago our association was organized; and if I were to allow myself to think on what those ten years signify to economic thought and to the representatives of it in this country, I should be led into a reminiscence which might possibly sound like a glorification of the achievements of the Association. That certainly would be inappropriate. But what is appropriate to the occasion is this: If indeed our work has been fruitful during the ten years that are now closing,

what is the cause of it? What can it be other than that profound interest which among the American people everywhere has been given to the subjects on which our work is especially expended? Is it not the fact that political economy is preëminently a science for the people of a democratic state? Is it not to the profound interest which the American people in every locality have given to the consideration of topics of this sort that we owe such measure of success—a large measure, I venture indeed to call it—as has attended the efforts of the economists of this country, and those of our own association, during the last ten years? It is my judgment that some attention should certainly be given to the change that has come in the condition of economic thought and study in our country during this period, in consequence of organized work. It cannot adequately be given here and now. Our debt of gratitude, not only to the State of Indiana, but to all states that have fostered this thought, that have given a welcome to the publications of this Association, is profound.

We thank you, Sir, for your special and cordial welcome to the State of Indiana. We know that we shall derive the full measure of pleasure and profit from our stay, which you so kindly wish for us.

ABSTRACTS OF PAPERS AND DISCUSSIONS.

PRESIDENT'S ADDRESS.

THE THEORY OF ECONOMIC PROGRESS.

BY PROFESSOR JOHN B. CLARK, COLUMBIA UNIVERSITY.

Progress and the hopeful attitude that goes with it are necessary if life in the present is to be worth living. A static world, though it were a paradise, would be intolerable. Isolated life is static. It lacks capacity for progress. Exchanges remove this difficulty. They enable a man to diversify his consumption and to specialize his production. They develop an industrial society. The especial force that dominates it is competition.

Competitive life is inherently progressive. Let us see whether progress will ever be self-terminating. Will society develop to a point at which a dead-lock within the social forces will occur and bring the movement to a halt?

Specialization is the feature of social industry, it opens the way for the use of machinery. This is available where one mechanical operation is many times repeated. In the hands of competing employers machinery rapidly increases wealth-producing power. If such rivalry ceases, progress will stop. It will mean economic paralysis.

Trusts do not extinguish all competition, nor stop economic progress. First, too high prices exacted by a

trust attract new competitors into the field. Secondly, the profits secured by such a combination, if they were to be used as capital outside of its own field, must create competition elsewhere. Thirdly, a trust that has possession of one industry has often great facilities for entering another. If such cross competition occurs, it will be peculiarly efficient in insuring improvements. Even a large sum exacted from the public in the way of profits may be borne if a trust gives any impetus to progress. If it checks progress, it is condemned, though it exacts nothing. Now profits and progress go together; and this union is probable even under a regime of trusts.

On the supposition that industrial progress is to continue, this progress is to be freer hereafter from burdens imposed on laborers. Workmen will have limited functions to perform, and can learn them easily. They can pass from one occupation to another. Their trade will not make them helpless when a new invention causes them to find new occupations. The wastes of progress are to be transferred to capital. An old machine becomes useless when a new one is invented. This loss, however, can be borne; for with the wastes caused by the discarding of old machinery, comes the gain from using new.

On this one issue,—the problem of progress in a regime of consolidated capital—depends the future of humanity. In so far as principles decide the event, it appears that man has the power forever to progress.

This result will be gained if human evolution does not turn backward and ensure a survival of the hope-

lessly unfit among industrial types. Such a reversal of the order of nature has not elsewhere occurred. We are justified in putting faith in evolution.

Competition,—rivalry in service,—is not capable of extinction. If so, progress can never cease.

A SYMPOSIUM—THE RELATION OF CHANGES IN THE VOLUME OF THE CURRENCY TO PROSPERITY.

PAPERS BY PROFESSOR IRVING FISHER OF YALE UNIVERSITY, AND PRESIDENT FRANCIS A. WALKER OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

Professor Fisher: This paper is confined to a small part of the subject announced, and is directed against the argument that the appreciation of gold aggravates debts. This argument looks only at the *principal* of the debt and disregards entirely the *rate of interest*. The contention is that appreciation when foreseen is offset by a lowering of the rate of interest. The Belmont-Morgan bond syndicate was willing to lend our government some sixty-five millions at 3%, if a gold standard were specified, but demanded $3\frac{3}{4}\%$ if they had to assume the risks of a fall of standard. To further fix our ideas, let us suppose two standards, gold and wheat, and that whereas to-day wheat is \$1 per bushel, it is expected in one year to sink to 96 cents. If the rate of interest in a gold contract is 8%, what would be the rate in the wheat contract? That is, if a man borrows capital to the amount of \$100, agreeing to return it one year hence with \$8 interest, what interest

would he have to pay if he expressed his loan in bushels? As he has to pay \$108 in the gold standard, our problem is solved by finding how much wheat this \$108 is equivalent to at the end of the year. Since wheat is to be at 96 cents, we see that \$108 will be worth $112\frac{1}{2}$ bushels, so that the rate of interest in wheat will be $12\frac{1}{2}\%$. Thus an expected depreciation of 4% is offset by $4\frac{1}{2}\%$ extra interest. In general if i represents the rate of interest in gold, j in wheat, and a the expected rate of appreciation, it can be shown that these three quantities satisfy the relation $1 + j = (1 + i)(1 + a)$.

So far it is assumed that the appreciation is foreseen. To determine how far this is actually the case several thousand statistical figures have been reduced and compared. During the period of the gold premium in this country there were two kinds of United States bonds, "currency" bonds and gold bonds, and it is found that the interest realized to investors obeys the law required, viz., that the appreciating standard has the lower interest. The same is true of two kinds of India bonds in the London market, expressed in the gold and silver standards respectively. The average interest realized in silver bonds since the fall in exchange began is 4.5% , and in gold 3.5% , showing a difference of 1% , whereas previous to the fall in exchange, the difference was not more than one-fourth of 1% . The averages in the money market give similar results. When prices are rising, interest is high. When prices are falling, interest is low. This is found to be the case in this country, England and Germany. We thus see that the aggrava-

tion of debts claimed by the bimetallists has been partly offset by a reduction in interest. It has not all been offset, however, and there remains probably a loss to debtors amounting to not more than 1 % in interest.

President Walker: Every purposed increase of the money supply, by act of government, having for its object the raising of prices and the scaling-down of debts, is subject to the gravest impeachment on the grounds not only of morality, but also of economic expediency. It carries with it the sting of fraud; and it leaves behind it a retribution, swift, sure and terrible. A metallic inflation, however, due to the discovery of new resources in nature, or to improvements in the arts, is subject to no such objection. Hume, McCulloch, Chevalier and Cairnes support the proposition that a considerable increase of the money supply from such a source, if not too rapid, may, by reducing the burden of existing taxes, debts and fixed charges, and by setting a premium upon business enterprise in the shape of enhanced profits, greatly promote current industry. This beneficial influence may be carried so far as to appear to constitute a creative force.

Turning to the effects of contraction, which may take place either by absolute loss or by a failure to keep up with an increasing demand, there is to be noted the inconsistency of those economists, especially affecting orthodoxy, who hold that inflation in a paper-money period has the power to produce almost unlimited evils, yet refuse to attribute any injurious effects to contraction. The author held that a diminishing money supply

might set in motion forces highly prejudicial to public prosperity. First, through enhancing the burden of all debts and fixed charges. That burden is, at the best, under the existing conditions of industrial society, a very heavy one; and it requires but a small addition to its weight to sink the less fortunate and capable producers. In the second place, contraction of the currency produces mischief through the effects which falling prices have upon the profits of business. Just as rising prices put a premium upon enterprise, speculation, and adventure, and thus give a fillip to production, so falling prices cut into profits, and very soon cut to the quick. It is a very little thing under a man's arms which will so increase his margin of buoyancy as to keep him afloat for hours. It is a very little thing around a man's neck which will overcome his margin of buoyancy, slight at the best, and drag him to the bottom. The above relates to the influence of falling prices upon the profits of individuals; but the greatest evil they produce is through their tendency to protract "hard times" and to postpone the revival of business. The restoration of confidence and enterprise must be tardier and more difficult when the general movement of prices is downwards than when it is upwards.

Discussion.

Professor Willard Fisher: The question resolves itself into two: How do changes in the volume of the currency affect general prices? and what is the influence of a rise or fall of prices upon industrial prosperity? The

old answers to both these questions are still essentially correct. The present wide use of checks, drafts, and other money substitutes, makes it necessary to modify the quantity theory of money from its earliest and most abstract form ; but the theory still contains more of truth than of error. The amount of the checks and drafts is what the mathematicians call a function of two variables. It depends in part upon the commercial confidence and enterprise which pervades society, but it also depends in a very important measure upon the amounts of the banks' cash reserves, and thus ultimately upon the amount of money in circulation. But if the amount of buying and selling, and the demand for a medium of exchange be supposed to remain constant, general prices will go up or down according as the total amount of the medium of exchange increases or decreases ; and in our present society an increase in the volume of the currency will cause a three-fold increase in the total complex medium of exchange. It will immediately and directly increase the active cash circulation ; it will increase the bank reserves and thus give a broader basis for credit currency ; and it will so stimulate industrial enterprise and confidence as to make a given basis support a greater structure of credit currency. And a decrease in the volume of the currency will similarly cause a three-fold diminution of the total effective medium of exchange. It is, therefore, still true that general prices tend to go up or down with the volume of the currency.

And the old view that falling prices hinder prosperity, while rising prices stimulate industrial activity, is also

sound at bottom. The motive for modern industrial enterprises is found in the profits of the undertaker. Yet a fall of prices tends in the clearest way to diminish apparent profits, and this would be enough to hold back some from active and expansive undertakings. But many charges of industry either are fixed or fall less rapidly than the prices of the finished products, and in just so far as this is true, not only apparent but also real profits are reduced. If, then, the fall of prices is due not to an absolute contraction of the volume of the currency, but merely to the failure of the currency to increase as rapidly as the production and exchange of goods, the burden on industrial prosperity is by no means so heavy. But it is a burden nevertheless. It prevents the world from realizing the full blessing that would have come if the improvements and increase in production had extended to money as well as to all other goods.

Professor E. A. Ross: There is a view that denies any connection between changes in price and national prosperity. However the currency behaves, there is as much mineral wealth, as much good land, as many barns, shops, factories, and machines, as much skill and industry as before. That this view is superficial is suggested by the phenomena of an industrial crisis, which is simply an acute form of the malady of falling prices. Here there is no destruction of the instruments of production, no failure of crops, no decline in diligence, yet there is an industrial paralysis; we see on every hand unused land, unemployed labor, silent mills, smokeless chim-

neys, rusting side-tracks. This spectacle ought to suggest that there is something more in prosperity than the physical factors of production.

Now this something I call industrial structure, and, to my mind, the chief evil of falling prices is the breaking down of this structure. Business enterprises are carried on by great combinations of men on a footing of mutual understanding and trust based on acquaintance, experience, and habit. A downward movement of prices keeps plucking out the keystone of the structure, the leader or organizer, and compels the elements to form themselves into new combinations. This, as I shall show, makes waste.

The way in which falling prices break down industrial structure is as follows: In the calculations which induce a man to engage in an enterprise, it is assumed that the prices of the completed product will remain during the interval of production at about the figure now prevailing. But under a regime of falling prices, this calculation always fails, because during the necessary period of production prices decline, with the result that the proceeds of the product do not avail to cover costs and leave a profit for the business man. If he is using capital of his own, he can stay in business till it is mostly swept away. If, as is more likely, he is running on borrowed capital, steadily falling prices will make it impossible to live and pay interest to the capitalist. He will be forced into bankruptcy and the business terminates.

The commercial death-rate, therefore, is higher than it should be ; just as during panic years there are more

failures than in ordinary years, so an era of falling prices taken as a whole shows a business mortality that is excessive.

Now, as for every death there must be a birth, *i.e.*, the starting of an enterprise to set to work the released labor and capital, it follows that falling prices increase the number of initiations of enterprises needed to employ the productive powers of the community. This swells unduly the total cost of initiating industrial concerns, and reduces the energy available for the actual work of production. In other words, the sinking of the price level, by continually breaking down business structure, compels so much outlay for rebuilding as to reduce the force that can be devoted to running the industrial machinery.

All these bankruptcies and smash-ups that follow in the wake of an insufficient currency, might be endured if they helped to bring the best men to the front, if they were continually plucking leadership from the hands of incompetent men and giving it to the more efficient. But they do nothing of the sort. The man who loses under this regime is the active business man; the man who wins is the capitalist, the money lender, the man who holds the money claim. If the enterprise falls into his hands, and his money claim becomes a property title he will find that the forces that formerly worked on his side now conspire to crush him. He, too, will learn how difficult is the lot of the man who tries to make profits out of a productive enterprise during an era of currency famine and falling prices.

Professor F. W. Taussig : I wish to touch on one point which I am glad to see was touched by all those who have presented their opinions to-day, and that is the question as to the effect of a regime of falling prices upon the business man. I can present what I have to say upon that subject by distinguishing between two sorts of cases. In the first place, let us consider the case of the simple and uncomplicated fall of prices, which brings with it also a fall in general money incomes. Suppose the quantity of goods to be sold is the same, the output of society being stationary. There is, then, under a regime of falling prices, also a decline in total money incomes, and in the average income of the business man. Let us suppose, secondly, a case in which, with a regime of falling prices, there is an increase in the total quantity of commodities put upon the market, and, with that increase of the total quantity of commodities put upon the market, a diminution in the money income which is not in correspondence with the fall in prices, or, indeed, conceivably, no diminution in the gross money income at all. It is quite conceivable that with the regime of falling prices in commodities, the total quantity of commodities put upon the market by those engaged in production shall so increase that the total money income of the business man, and consequently of those whose total incomes are derived from his, will not fall, but rise.

The second has been the actual experience of the world in the last twenty years. Can there be any doubt that with the regime of general falling prices of commodities which we have had during the last twenty years,

there has also been an increase in the quantity of commodities put upon the market and sold, such as to outweigh the falling prices and bring a general increase in the total money incomes? What has been the situation of the average business man? Has he encountered falling money incomes with the falling prices of the commodities that he has had to sell, or has he produced and sold so many more commodities that his money income has probably on the average increased? I think there can be no doubt that the second is the phenomenon which has taken place during the last twenty years.

What is the bearing of this upon the question as to the effect of falling prices upon the elasticity of the business man? We may grant that under a regime not only of falling money prices, but of falling money incomes as well—of falling money prices with a stationary quantity of commodities put upon the market—the situation would be unfavorable to the activity and enterprise of the business man. This was the state of things during the years immediately following the civil war. But we know that during the last fifteen years the average money income of the business men and of those well-to-do classes whose incomes are comparable to those of the business man, and not only of those, but of many of the income of the laborer as well, has not fallen, but risen. What is the situation of the business man? It is true he finds the price of commodities falling, but at the same time he finds his money income not diminishing. Is he disturbed? Does he find difficulty in meeting his debts? Whether or not this state of things conforms to the

ideal of justice between debtor and creditor, I will not pause to inquire. The point to which I wish to draw your attention is that the case is not the simple case of falling prices and falling incomes; it has been the complicated case of falling money prices with rising money incomes.

Further, what has been the proximate cause of the falling money prices? That proximate cause has been the increase in the quantity of commodities put upon the market by the business man under the stimulus of increased invention, increased progress, and improvement in the arts of production. That has been the direct, immediate cause of falling prices, and that has caused the volume of commodities to be increased faster than the volume of the circulating medium. Is the tendency to declining prices, taking place in this way,—a fall in prices, with a rise in money receipts and in available income,—is that likely to bring about a clog upon industry?

Professor E. W. Bemis: If the creditor finds that his thousand dollars will buy one-third more commodities, he has gained one-third by the progress in the arts. If the debtor finds that his wages have not risen and that it takes the same exertion to pay his debt that it formerly did, he has remained stationary, while the creditor has gained. Therefore, relatively, the debtor has lost. The president of our association, who writes conservatively on this question, admits in the September, 1895, *Political Science Quarterly*, that the hours of labor remaining the same—and the reduction does not average

five per cent. since 1873—wages in money per day should rise at least as much as does the amount of goods a dollar will purchase. Now a dollar will purchase from 60 to 70 per cent. more of goods in general than would the gold dollar in 1873, while during that time wages in gold have not risen any in England, and very little in this country, if we consider the recent reduction in wages and in the number employed. It is very doubtful, also, whether the well-known Aldrich investigation covered a wide enough range of workers to establish its conclusions relative to the rise prior to 1892.

Combining the statistics and estimates of Sauerbeck in the Publications of the Royal Statistical Society for June, 1893, and March, 1895, it appears, that of the £233,500,000 of gold that was mined in the world in the nine years ending Jan. 1, 1895, fully £12,000,000 a year or £108,000,000 in all was used in the arts. Soetbeer, Suess, and Andrews consider this too low an estimate. The amount that went into the Russian and Austrian war chests, or into the banks of those countries in preparation for the resumption of specie payments was £89,000,000; there was absorbed in the Orient, South America and Africa, £21,000,000 and there was added to the Bank of France in 1893 and 1894 £14,500,000. Only £1,000,000 was left to increase the net gold money of North America, Great Britain, Germany, Norway, Sweden, Belgium, Holland, Switzerland, Denmark, and many other countries. Over \$122,000,000 of the gold output of 1895, has been absorbed by Russia and Austria. The arts have taken nearly if not quite

all the remaining \$80,000,000. This seems to account fully for the rise in the value of gold since 1873.

General A. J. Warner: I must take exception to the suggestion that, if products increase so as to give the same income in money to the producer, then there is no injustice done. In the first place, it is manifestly impossible in a large class of our industries, as for instance, the entire agricultural industry, to so increase production as to give the farmer anything like the same income that he had before the fall in prices; and the fact is that the farming class as a whole must accept from one to two thousand millions a year less for their labor and their products than they received ten or fifteen years ago. The increase in production has been mainly limited to those industries where, by improved methods of production, new machinery, etc., it has been possible to increase products rapidly enough to give to capital so invested about the same income that it received before the fall in prices. But even in such cases, monopoly, controlling production and prices, has had much to do with results.

Again, while wages have been kept up in certain lines of industry by labor combinations, earnings, which are the product of wages multiplied by time, have not been kept up; and especially have the earnings of the entire agricultural class not been kept up. But suppose it were possible, in all lines of industry, to so increase products, in periods of falling prices, that the same income would be derived, where would equity lie then? Who would be entitled to this gain in production, the living

or the dead? Must the producer surrender all the advantages gained by his exertion, his skill, by improved methods, the result of his inventions and his labor, and be content to receive only the same income as before, while the dead hand reaching from the grave takes all that is gained?

The proposition advanced by the distinguished professor (Prof. Taussig) as I understand it, is that if only production is kept up, even though invested capital gets all the increase, there is no serious loss to the nation. But why, I ask, should not the supply of money be allowed to increase *pari passu* with products, in order that prices may remain stable and the relation between those who produce and those who consume be kept as nearly the same as possible?

Professor Willard Fisher: It is true that the improvements in productive processes have enabled some undertakers to stand the fall of prices; and undertakers who have endured, have greater average incomes than they had before. But in making up our averages we take no account of the undertakers who have gone to the wall. Again, perhaps those laborers who get steady employment, receive higher gold wages than they ever did before; but there are a larger number of people out of employment year by year, than there were before 1874-5, and in computing wages we take no account of these unfortunates. Furthermore, labor organizations are more thorough than they were a decade or two ago, and a considerable part of the rise of wages, where rise of wages can be made out, is due to the higher organiza-

tion of labor, which enables the men to make a stouter stand against employers. •

There is another consideration. Labor is more skillful year by year, certainly decade by decade, than it used to be. Therefore, eight hours is a more valuable thing and ought to receive higher gold wages.

Professor H. H. Powers: I have a word to say about the question of justice. Most speakers in this discussion have implied that somebody has a perfectly obvious claim to all the wealth that is produced. But under a regime of industrial progress a surplus is continually created which no individual can claim, because no individual created it. If the debtor pays his debts with less effort than before, or if the creditor gets more than his bond calls for, either has gained something to which he has no obvious claim. That something belongs to society. What disposition of it is obviously just? There is none that is obviously just. We can do with it what we please. Now, as Professor Taussig has said, the continual creation of this surplus has offset the mischief which otherwise must have happened. Does that alter the principle that rising or falling prices work mischief? Granting that entrepreneurs have not been discouraged as a net result of *all* that has happened. Would they not have been more *encouraged* if something else had happened, if this surplus that does not belong to anybody had been distributed in some other way? Shall society, by its manipulation of the currency, dispose of this unclaimed surplus in a way to encourage the active or the passive parties engaged in industry? Beyond a

doubt, in a general way, the creditor class is relatively a passive, and the debtor class relatively an active class. I am not entirely certain that all should go to the active class, but on the whole does there not seem to be a balance of advantage in favor of such a disposition? I am not satisfied with the fact that as a net result of all our progress, the entrepreneur has not suffered from a net balance of discouragement.

Professor W. A. Scott: I feel very sure that President Walker has not understood the state of mind of those persons who feel that the quantity theory is not an adequate explanation of the value of money. I belong to that class, and President Walker has not helped my case. I know that there is a close relation between the quantity of money and prices, but I am not at all sure that the causal relation is correctly stated by President Walker. Indeed, I am quite inclined to the belief that the causal relation is the other way about; in other words, that the quantity of money in circulation is regulated by prices and not *vice versa*. The statement that the quantity theory is but the application to money of the old formula of demand and supply is true, but does not help the matter at all, for the formula of demand and supply does not explain. It simply restates the problem.

A SYMPOSIUM. — THE PRATICABILITY AND DESIRABILITY FOR THE COMMERCIAL WORLD OF A DOUBLE STANDARD OF CURRENCY.

PAPERS BY GENERAL A. J. WARNER, PRESIDENT OF THE AMERICAN BIMETALLIC LEAGUE, AND PROFESSOR F. W. TAUSSIG, HARVARD UNIVERSITY.

General Warner: In a metallic system the real standard of value is the metal adopted as money; not a piece of it, but the mass of the whole. The value of a single unit of such money depends not on its color, nor on the fact that the metal is malleable or ductile, but on the number of pieces, of given weight, that can be made of it, or of so much of it as is appropriated to monetary use.

The so-called "double standard" is the use of two metals as money instead of one. In that case the mass of the two metals constitutes the standard, and the value of a single unit of money depends upon the number of pieces, of given weight for each metal, that can be made of the mass of the whole, or of so much of the whole as is appropriated to coinage, or use as money. It is not truly a "double standard," but a standard composed of two metals instead of one. The real question then, is: Is it better to make the standard of value of the mass of the two metals, or of gold alone; or in the language of Jefferson, rest the unit of money on one metal or both? Or should the supply of money for the world be restricted to the yield of the gold mines, after deducting the requirements for the arts, or be limited only by the production of both gold and silver, after the demand upon each for other uses has been supplied? For, in the end, the question is largely one of money supply.

The fact will hardly be questioned from a scientific standpoint, that, prior to 1873, prices throughout the world were determined, not by one metal but by both; for both metals, then being admitted freely to coinage in countries enough to secure substantial parity on a ratio of 1 of gold to $15\frac{1}{2}$ of silver, the effect on prices, or in determining price levels, was the same as if instead of any silver, the stock of gold devoted to money uses had been increased by as much gold as would equal the weight of the silver in use, divided by $15\frac{1}{2}$, or, as if instead of any gold, the stock of silver had been increased by $15\frac{1}{2}$ times the weight of gold then in use as money; or if instead of the metals being coined separately they had been fused together and coined as a compound metal, one part gold and $15\frac{1}{2}$ parts silver. In other words it was the mass of the two metals and not one alone, that then determined the world's prices.

This was substantially the monetary condition of the world prior to 1873. It made no difference whether one country had more of one metal and another less; it was always the two acting together that determined price levels. Nor was this condition changed by a premium on either of the metals in local markets. In that case the variations, in whichever metal it was made manifest, was due to a special demand for that metal at that time and place, and did not affect prices more than they are affected now by variations in the price of exchange. In fact, the apparent variation in the ratio was nothing else than a matter of exchange, and was no greater at any time than are variations now in gold between New

York and London, as indicated by the variations in the price of gold exchange. There never was a time in France, from 1803 to 1873, notwithstanding wide variations in the production of the metals, when the price of any commodity was not the same in either metal, and this is the truest test, for it is only when units of money maintain substantially stable relation to units of products that prices are kept normal and equity is secured.

As there never was a time since gold and silver came into use as money when the demand for money was not the dominant demand, it follows that there never was a time when there was a "commercial ratio" independently of, or separable from the money ratio.

The Force of Law.

Whether one or both metals shall be admitted to use as money is a matter of law, and hence the demand for them for money is a demand created by law, whether statutory or derived from custom.

If both metals can by law be endowed alike with the money function, so that either can be substituted for the other in all money transactions, the coining ratio at once becomes the commercial ratio. It is the money ratio, under conditions of free coinage, that makes the commercial ratio, and not the commercial ratio that determines the money ratio; hence there is no insurmountable difficulty in the way of having a money standard of two metals, leaving the supply to depend on the same general law that would govern the supply of one, if one alone were used. Indeed, the experience of ages in the

use of both metals as standard money ought to be enough to settle that question as a practical one. The question, then, of the desirability of a standard composed of two metals, becomes largely one of money supply, and the question of money supply is a question of prices.

It is a question of money enough to maintain fairly stable prices in the world. To do this the proportion between money and commodities must be made as constant as possible. Locke long ago wrote: "The value of money, in general, is the quantity of all the money in the world in proportion to all the trade." The prices of *particular* things, of course, depend upon the supply of, and the demand for such things, money remaining constant; but *general* prices depend upon the proportion of money to commodities, or more precisely, perhaps, upon the proportion of money to debts to be paid and things to be bought and sold. . . . The demonetization of silver greatly reduced the supply of money, while population went on increasing. Before 1872, less than 50,000,000 of people were under the single gold standard, while now more than 350,000,000 have made gold alone their standard. This has necessarily enormously increased the value of gold, not only as compared with silver, but as compared with commodities generally.

A question of vital importance in this connection, is whether the whole world is finally to come to a gold basis, or whether it is to remain divided always, as now, three or four hundred millions under the gold standard and eight or nine hundred millions to remain on the

single silver standard? If not, then over how much of the world is it proposed to extend the single gold standard? If a common standard is not important for the whole world, why is it so important for a part of the world? And just how much of the world is it necessary or best to unite under one standard? May it not be a question, in that case, just where the interests of the United States may lie?

One thing is certain, if a common standard is ever to be established for all countries it must be the *bimetallic* standard and not the single standard of either metal. . . . The president in his recent message said, "There is a vast difference between a standard of value and a currency for monetary use. The standard must necessarily be fixed and certain." A "fixed and certain" standard of value is, of course, as impossible as perpetual motion. Nor is it possible to have a standard of value that is unaffected by other forms of currency. Not only is the value of gold affected by an increase or decrease in the quantity of gold, needs for it remaining the same, but the value of gold is affected by a general increase or decrease in the currency that supplements gold. The withdrawal of greenbacks and the notes of 1890, as now proposed, if their place be not immediately filled by new currency in some form, would compel a redistribution of the world's gold in order to secure to us our distributive share of the world's money, and this would affect the value of gold the world over. . . . Inasmuch as standard money determines the volume of other currency that can be kept at par with

it, and the volume of all the currency, the volume of bank credits that can be safely maintained, it follows that the all important part of the whole is that part in which all other forms of currency are redeemable, and as the volume of currency and bank credits depend upon the proportion they bear to primary money, so prices ultimately rest back upon and are determined by the supply of standard money ; and hence the importance of having the metallic part of the currency increase with the increase of population and wealth. Consequently the fact that other forms of currency and credit so largely supplement the metals does not lessen the importance of a full supply of the metals. On the other hand it is necessary to the stability of prices that other forms of currency should continue to supplement metallic money.

Professor Taussig: There are unquestionably evils arising from the present relation between gold and silver, and from what is called the demonetization of silver. Three evils are commonly mentioned. Of these, two are real ; the third, which if real would be the most serious, in fact is much less substantial than is commonly alleged. Of the two real evils, the first is the disturbance in the exchanges between gold using and silver using countries. This causes fluctuations and uncertainties, and introduces an additional element of risk into foreign trade.

The second real evil is the top-heavy condition of the legal tender silver currency of some of the great civilized countries, more particularly Germany, France and the

United States. The silver currency of these countries is practically a fiduciary currency, essentially like a paper currency, except that there is a limit to its possible depreciation. The existence of such a currency, especially in the proportions which it has assumed in the United States, is a real evil.

The third evil commonly stated is the fall in prices which has taken place in the last twenty years. Whatever may be the causal relation between the decline in prices and a scarcity of gold, the fact of a general fall in prices, and of an appreciation of gold in that sense, can hardly be denied. But with the general fall in prices, there has taken place almost universally a rise in money incomes; or at all events money incomes have not fallen. This double movement of falling prices and rising incomes, means an increase in material prosperity, and is a cause for congratulation, not for regret. It means that the burden of debts has not become heavier, and it means that no depressing influence has been exercised upon industry and trade from the downward pressure of prices.

As to the two real evils mentioned, the question arises whether they can be and ought to be cured by a system of international bimetallism. It may be granted that the free coinage of silver and gold at a common ratio by the four great civilized countries (the United States, France, Germany, and Great Britain with British India) would probably bring about the desired result: namely, a rise in the market price of silver to such a point that the intrinsic value of silver coins would not be less than their coinage value. This is not entirely certain, but it

is probable. An agreement for this purpose, however, would be inevitably frail. A long series of abortive efforts shows how difficult, if not entirely impracticable, it is to frame it. Even if framed, jealousies between states, commercial rivalries, and political friction would make it difficult to maintain. Its disruption again would bring back the old state of affairs, with new fluctuations and new uncertainties.

Considering all the circumstances, the sound policy now to be followed in regard to the international use of gold and silver is a waiting policy. Let it be seen what will be the future production of silver and in what manner the output will be affected by the present price. On the other hand, let it be seen what may be the future production of gold, and whether this will not suffice (it may more than suffice) for meeting the monetary wants of the civilized world. Of the two real evils in the present situation, that arising from the dislocation of foreign exchanges belongs to the period of transition and may be expected to disappear or to be greatly mitigated as trade accommodates itself to the new conditions. The top-heavy condition of the silver currency of the civilized communities can be remedied by resting it more substantially on a gold basis, and, in time, by reducing its volume and giving it the character of subsidiary money. The only possible sound policy for the civilized countries of the West now is to adopt and maintain the gold standard. There are no indications that there is any deficiency of gold for this purpose. In the United States, more particularly, it is the will rather than the way which is not clear.

Discussion.

Professor W. A. Scott: I am not going to give you the little speech I had prepared for this occasion. Much that I had thought to say has been better said than I can possibly say it, and I can see no object whatever in repeating it. I can subscribe very heartily to the conclusions to which Professor Taussig has come in his paper, and I shall very briefly refer to a point which has, so far, been neglected.

During this morning's discussion it seems to have been frequently assumed that the existence of evils due to falling prices constitutes a reason for monetary reforms. In my opinion this is a false assumption. We do not need a rise in price in each and every commodity. In the interests of debtors all that is needed is a rise in the prices of the particular commodities which have experienced a fall and by the sale of which debtors must secure the means for meeting their obligations. Justice to the mortgaged farmer, for instance, demands that the prices of the staples of agriculture should be raised to the point from which they had fallen since he contracted his mortgage. The entrepreneur who finds himself unable to meet his obligations on account of a fall in the price of a product of his factory wants these prices raised to the point from which they have fallen. But the products of the farm and of the factory have not experienced in the same degree a fall in prices and some have not experienced any fall. Now if we should lower the value of our money unit by manipulations of our currency, we should raise the prices of all commodities, regardless of

whether they had fallen or risen or remained constant, and we should raise all to the same extent regardless of whether or not they had fallen to the same extent. This would amount to the infliction of wrong upon *some* creditors in order to do good to *some* debtors, a proceeding which, to my mind, smacks of bad statesmanship. I fear that the habit into which we have fallen of using in our monetary discussions that good-sounding but almost meaningless phrase, "the general level of prices," is largely responsible for the unfortunate belief that an instrumentality which is capable only of raising the prices of all commodities at the same time is fit for the work of remedying the evils due to a fall in the prices in certain classes of commodities.

In my opinion the only ground upon which a radical demand for radical monetary reforms can be based is the demonstration that radical changes in recent years in the relations between the demand and the supply of gold have been *a cause* of the fall in prices. Such a demonstration I believe to be impossible in the present state of our knowledge of the causes of price changes. So far as the fall in prices has been due to causes operating primarily upon commodities it does not constitute a valid reason for monetary reform.

Professor H. W. Farnam : In order to maintain a so-called double standard it is necessary that the government should be able to control the relative value of the precious metals. Of many plans that have been proposed to bring this about, two have been tried and may therefore be tested by experience.

One is what is commonly called bimetallism, *i.e.*, a system which allows the free coinage of both gold and silver at the mints, and makes both an unlimited legal tender. The other is a system which provides for the purchase by the government, of the metal which is falling in value, relatively to the other. Bimetallism has been tried by a great many countries of the world, including the United States, down to 1873, and France down to 1876. It is claimed by bimetallists that the French policy was entirely successful. However that may be, it is certainly true that the relative value of gold and silver, though not perfectly constant, was subject to comparatively slight fluctuations from 1803 to 1873.

The plan of government purchases was tried in the United States for about 15 years, first under the operation of the Bland Act, then under the Sherman Act. This plan failed completely. Silver fell steadily in value during the entire period, the fall in the London market averaging about a penny a year. Both plans were alike in that they brought the same economic force into operation, *viz.*, an enhanced demand for the depreciated metal. If, then, one succeeded and the other failed, the reason must be, either that the force was not applied as powerfully in the second case as in the first, or that the force to be overcome was greater. In order fairly to compare the French experience with our own we must take the 20 years of silver depreciation, 1821 to 1840, for during the period of gold depreciation following 1849, the French demand was reinforced by that of

England and the United States. If then we compare these 20 years with the period 1878 to 1893, we shall find that the demand exerted by the United States in the second period was much greater than that exerted by France in the first. During the three years of the Sherman Act it was nearly three times as great, and the monetary demand of the world at large was also steadily growing. If, then, the demand was greater than in the former case, its failure to keep up the price must have been due to the superior strength of the opposing conditions, *i. e.*, to the increased supply and the lowered cost of production. This is the fact. The output increased fourfold in about 30 years. But this in itself is not so important a factor as the potential supply at a low cost of production. No one knows how great this is, but the fact that mine owners were quite willing to meet the increased demand created by the Sherman Act, in spite of a falling price, indicates plainly that if we now had free coinage, at the old ratio, the supply would be great enough to drive every dollar of gold from general circulation.

It is conceivable that under favorable conditions the government demand might overcome slight fluctuations in the value of the metals. But the steady fall of silver during the great demand of the Sherman Act, followed by a recovery after that demand had ceased, shows how insignificant an influence the government exerts at the present time.

Professor Sidney Sherwood: Mr. President, my argument, had I time, would consist of four points: (1)

international bimetallism would be practicable if it could be inaugurated, (2) it would be highly advisable, (3) under existing circumstances, especially the attitude of England, the attempt to inaugurate such a system is utterly hopeless, (4) recognizing this fact, the best policy for the United States is to come over squarely and definitely to a single gold standard.

I shall speak only to the second point. In arguing the advisability of international bimetallism the important question is not so much the quantity of money, as the stability of the money unit.

Stability in the unit is of the utmost importance in the maintenance of the existing organization of productive forces. The maintenance of this organization depends upon the effective anticipation of future wants, for it is in response to this forecast of the future that our capital grows. The only way in which this stream of capital goods is kept flowing on until it is transformed into consumable goods is by the use of some embodiment of generic value which expresses clearly to producer and consumer the values of both capital goods and finished goods. This the money unit does. If it be unstable in value a speculative element is introduced into the whole process of industry which deranges the productive machinery. The range of future wants is shortened, capital shrinks or is less effectively organized and the various consumption goods no longer keep their wonted proportions.

In regard to progress, stability in the money unit is still more important. Progress means an effective ex-

tension of this anticipation of future wants. Given that, a re-organization of productive forces follows, fitted to yield a larger flow of consumable goods and to extend the process farther into the future. If we are to project our wants farther into the future, we must reduce to a minimum the speculative fluctuations in the monetary unit.

Now, I urge that international bimetallism would reduce these speculative fluctuations.

Under gold monometallism, stability of the unit rests solely upon the free marginal movement of gold between its commodity uses and its money uses. Under international bimetallism we should have two additional margins of interchange—that between the commodity uses and the money uses of silver and also that between the money uses of gold and the money uses of silver.

Stability in value is not a mere question of the quantity of the metals, but depends upon the frictionless movement of the metals from one use to another—upon their marginal equivalence in value in their various uses. Bimetallism would give three margins of escape for disturbing movements instead of one and would spread the disturbances over wider areas. International bimetallism would leave silver largely in the countries which prefer silver, and gold in the countries which prefer gold, and yet, while minimizing the international movement of gold and silver, would give to both classes of nations the advantages of both metals.

Professor John H. Gray : Those who for many years after the present fall of prices began, stoutly denied the

fact, now admit the fall but declare this no evil. Their assumption is that falling prices resulting from improvements in productive processes produce no hardship. The claim is that when the debtor pays back more commodities through the results of the same number of hours of average labor he does simple justice. This is a false standard of payment and gives all the advantages of human progress to the creditor. For it is due to no effort or service of the creditor that labor becomes more efficient. Therefore falling prices bring hardship to the debtor. The extent of the evil is proportionate to the amount of indebtedness, and the time it has to run. Mr. Holmes estimates the indebtedness of the people of the United States, public and private, at twenty billions. Let us make all allowance for uncertain factors in the estimates, and then observe the fact that the major part of this enormous debt, from its very nature, must be long-time debt, and we get some idea of the great hardship. The five billions of railroad debt was contracted in an era of high prices, and with the expectation of high prices, and high rates. But falling prices have forced rates to a no-profit basis. As a result, the statistics for the year ending June 30, 1894, show one-fourth of the railroads in the hands of receivers, a diminution of 94,000 in the number of employes, a reduction of wages for those remaining, and finally a reduction of thirteen billion ton-miles in the freight traffic. But the railroad is the best index of the general condition of industry. These figures show widespread stagnation and depression. They also show that the men dismissed from the railroads could not find

profitable employment elsewhere. It follows that the claim of the gold monometallists that fixed money incomes, wages, and profits have not fallen is erroneous. At least, fixed money incomes must ultimately be forced down, if prices continue to fall. Furthermore speculation robs those with fixed money incomes of any advantage, by keeping retail prices up. But the entrepreneur is infinitely more important in this connection than all the other classes referred to. The belief that general prices must fall as society progresses is based on the fallacy of general overproduction. For in fact, individual prices fall only to rise again as the cause of the fall becomes general. The statement that the manufacturer can recoup himself from falling prices by increase of product rests on a misconception of the modern industrial process. It ignores entirely the element of fixed capital. The only way of increasing product is by increasing expenditure for improved machinery. The same plant does not turn out more product because prices fall. With stable prices the manufacturer must "write off" much fixed capital every year on this score. Material progress therefore is impossible under what the people believe will be falling prices. They may be deceived by hope for a time. The effect of falling prices cannot be wholly offset or discounted by lowering the rate of interest. The evil, when fully appreciated will not be tolerated. International bimetallism seems the best thing to strive for.

Professor Willard Fisher : Professor Taussig has suggested that it might be difficult to maintain international

bimetallism if the out-put of one or the other of the metals should increase a great deal. But we know that the out-put of gold from 1840 to 1860 increased about ten-fold; and yet with France alone supporting a bimetallic system, there was scarcely any depreciation of gold as compared with silver, no depreciation that cannot be fully accounted for by the charges involved in passing one or the other metal through the French mint. It is never to be expected that a bimetallic system, even if quite universal, would maintain the market ratio at exactly the legal ratio. The mere seigniorage charge would prevent that, but in addition to the seigniorage, there are other charges of precisely the same influence. You must always take into account the transportation charges for the metal between the market and the mint. You must take account of the insurance, of the agents' commissions, and of the capital locked up while the metal is thus in transit; and if you take into account all these considerations, the deviations of the London silver market from the French legal ratio between 1803 and 1873 will be fully accounted for.

Next in importance is the point made by Professor Scott, that if we attempt to remedy one evil, we shall work another. If we attempt to relieve one class of debtors, we may inflict evil upon another class. That is true; but if the depreciation of values is a depreciation of *general* commodity values, then a correction wrought through manipulation of the currency would do more good than harm.

No arguments against a policy can be drawn from the

fact that in carrying it out to the benefit of a general class, you will incidentally injure this man or that man, here or there.

Professor Ross: It is not the absence of parity that concerns us, but rather the social effects of a gold standard, and these have been too much glossed over this afternoon by the champions of that side. We have, say, twenty billions of indebtedness in this country and if it be granted that one-fourth is owed from some producers to other producers, we have left fifteen billions owed from producers to non-producers, that is, to the holders of the fruits of past production. Now if the annual premium by appreciation of gold is 3% that means 3% of fifteen billions, or four hundred and fifty millions of dollars, at stake in this controversy. This enormous sum will go here or there according to the policy we adopt. It is not at all a light thing whether this sum shall abide with the present producers as an unearned increment, if you please, but still a premium on their industrial activity, or shall be handed over to the holders of accumulations who have already had the premium that accrued when they were engaged in industry.

We are told to consider what would be the effect of the abandonment of the appreciating gold standard upon the price of this class of goods and that class of goods and the other class of goods. Myron Reed says that when you have put seventy-five cents' worth of cheap physiology into a boy, he feels so fearfully and wonderfully made that he can't get over the fence. Now it seems to me if we are to dally with these minute eco-

nomie considerations we shall never get anywhere, and meanwhile the gold standard will be squeezing the life out of many of us.

I confess, furthermore, I can see no difference between showing that commodities have become too plenty and showing that gold has become too scarce. Nobody is charging gold with being an unfaithful servant or an inherently defective standard. The whole question is simply a matter of prices and of the bearing of the course of prices on the possession of wealth.

Professor Taussig: A word in explanation of something which I said before, namely, as to the mode—supposing an international agreement to have been brought about—in which increased production of silver might affect it. I tried to make it clear, but evidently I did not succeed. In my opinion, if the four great countries were to make an international agreement and keep it consistently and in good faith, and unshaken by any disturbance, they could carry it through. The mode in which a great production of silver might affect the agreement, would be by shaking the good faith of the several parties to the compact. If a great production of silver took place, it would first flow into the United States naturally and be coined there. Then it would flow to Europe. If the silver went to Great Britain, then there would be the question whether Great Britain would try to shift it to other countries, and whether those other countries would not wish to retain their gold and send off the silver. Personally, I would say that *if* the four countries consistently maintain the agreement,

it could be done ; always provided that good faith were really maintained.

I think that the international agreement, so maintained, would cure some existing serious evils. The evils, to which Professor Ross refers, as very deep social evils in the present state of affairs, I have not been able to see. I have not been able to see that the debtor class, as a whole, has been seriously injured. I think that money incomes, on the whole, have tended to rise, or at least to keep steady. Whether there has been on the whole, abstract justice—an ideal state of affairs—between debtor and creditor, I do not know. The question before us is whether there is a serious social exigency. I believe the evils of the existing situation under the gold standard are chiefly monetary, not deep reaching social difficulties. They are not unbearable, nor productive of the sort of injustice Professor Ross and General Warner describe.

Professor F. C. Clark : I agree with some of the arguments presented, but not with all. I think some important points, however, have been overlooked. The first is the question of war—the phenomenon of nations hoarding for war. A war footing among European nations means a gold footing, and so long as the *fear of war* exists among those nations which are at the same time the great commercial nations, there can be no free play of those economic laws and forces that the advocates of international bimetallism hold in view. The very fact that these nations are on a war footing forbids any practical solution of the difficulties along any lines thus

far proposed. Why then is that which is, in point of fact, impossible under existing conditions—desirable? Again, in the words of Professor Sherwood, nations do differ. We cannot treat them all in the same category. England is neither a silver nor a gold producing nation. She is a nation depending for existence on international trade and, inasmuch as she trades with all the world, she must have her balances paid in gold. The United States, being both a gold and a silver nation, stands in the middle. On the other extreme, are those nations depending but little on trade, that are almost exclusively silver producing. There are these three classes of nations at least, and the economic differences between them preclude agreement.

It must be remembered also that these questions must be settled, if settled at all, according to the present conditions and, inasmuch as England is at present a gold country, in the way I have explained, we must not think that she can change to international bimetallism all at once. It is psychologically impossible, as well as economically impracticable. It would be mere philanthropy for England to take up the international bimetallic system at the present time. The conclusion then, as it seems to me, is that since any uniform policy based on common agreement of the great commercial powers, including the United States, is at present utterly impossible, but one alternative remains, namely : that America shall 'play it alone.' For the undertaking of such a Herculean task, I, for one, am not yet prepared to subscribe.

General Warner: Bimetallists do not rest their case upon the cost of producing the metals, nor upon their relative supply. They say if demand varies with supply, that is all that is necessary; and if one metal can be substituted for the other in all money transactions, demand will be as unlimited for the one as for the other. As to the cost of producing the metals, I have it on good authority that there are mines in Colorado now that are turning out gold at a cost of less than 50 cents an ounce. They will not continue to do this very long of course.

Again, as to the point made by Professor Taussig, which I deem a very important one, that inasmuch as money incomes are kept up by increased production, therefore no serious consequences follow falling prices. In the first place I think it is the exception rather than the rule that business men do derive the same profits or receive the same income, from their larger production that they did formerly. Besides, as I stated this morning, the entire farming class are not receiving the same incomes, and cannot. As I look over the country, I see evidences everywhere of want of prosperity among that large class of our people. It is so too with the laboring classes. To illustrate: In 1893 the presidents of the principal railway companies said: "Taxes we cannot reduce; interest on our bonds we must meet; we cannot economize there; we cannot reduce the wages of our employes without provoking strikes. There is but one thing we can do; we can cut down the force." And they did. They reduced the number of employes about 250,000, or something like one-fourth of all the men em-

ployed on the railroads. When these laborers stopped work, their power to purchase practically ceased, affecting still another class of producers. The holders of railway securities received their dividends; the tax collectors received their taxes; the incomes of salaried officers continued; but how about the 250,000 men who were thrown out of employment? I think that illustrates fairly well how falling prices operate, and shows who gain and who lose by it.

A word as to what Professor Scott said respecting the appreciation of gold. He seems to think that the fall of prices is due to something beside the appreciation of money. How there can be a fall of prices without a rise of money is something I cannot understand. If it takes more commodities to get gold, it takes less gold to get the same commodities. If prices have fallen gold must have appreciated. One side of the balance cannot go down without the other side goes up. I think all will agree to that.

I agree with Professor Taussig that if we are to have the single gold standard, we must have a larger proportion of gold in our currency. But how are we to get it? We cannot borrow it and keep it. The gold standard cannot be maintained by borrowing gold. There is one way, only, by which we can keep gold here, and that is to *buy* it, pay more for it than any other country will pay. In other words put prices down, and we must put prices down much lower than they are now before gold will stay here. I think the Professor will agree with me in that. Will it have no

deleterious effect upon the industries of the country to do that?

It must be remembered, too, that we are a debtor country. Besides offsetting imports with exports, we must pay to other countries three or four hundred million dollars a year. We must pay this with gold or commodities. We can pay it with commodities only on condition that we will sell lower than any other country. If prices are high our creditors will refuse to take commodities and demand gold.

As it is admitted that prices must go lower in order to keep gold here and maintain the gold standard, I want, in conclusion, to ask this question: If gold is to go on increasing in value and prices continue to fall twenty years more as they have for the last twenty years, who at the end of that time will own the world?

DO WE WANT AN ELASTIC CURRENCY?

BY PROFESSOR F. M. TAYLOR, UNIVERSITY OF MICHIGAN.

In a general way, the paper is an argument for the desirableness of an elastic currency, and is based chiefly upon a statistical study of past experience. The subject is treated under three principal heads; (1) the monetary need of a country is subject to variations from season to season and from year to year; (2) the failure of the supply of money to adjust itself to these changes in need is productive of harm; (3) experience has shown that an elastic currency, in some degree at least, diminishes this harm.

We should, of course, expect in advance to find variations in the need for money from season to season and from year to year, since there are, plainly, very great differences in the degree of industrial activity. But some writers are inclined to see in the extension of credit as a medium of exchange, reasons for thinking that there are no longer any considerable changes in the need for actual money. This view is a mistaken one, as can best be shown by an appeal to the facts. Changes in the money need of the country inevitably show themselves in the variety of money movements. Particularly significant, is the ebb and flow of money between the country at large and the great banking centers. Idle money always tends to accumulate, first, in the middle-sized cities, then in the reserve cities and, finally, in New York, which keeps the ultimate reserve of the whole country. So, on the other hand, when the country again needs the money, it is drawn from the nearest city, which, in turn, gets it from some larger reserve city, and this, finally, has to apply to New York. From various sources, we are able to get a fairly accurate knowledge of these movements. Their general trend is reported in *Bradstreet's* each week. The figures of the movements in and out of New York are reported in detail for each week in the *Financial and Commercial Chronicle*. We have also each week the changes in the reserves of the New York banks. From these and other sources, it is easy to show in conclusive fashion that the money need of the country as a whole is much diminished in the mid-winter months, slightly increases in early

spring, falls off again in late spring and early summer, expands greatly in the fall, and declines towards the close of the year.

The extraordinary variations in the need for money, which characterize a commercial panic, like that of '93, are too familiar to need elaborate proof. From the same sources as before, ample data can be obtained to show that the need for money is subject to very great fluctuations as between different years and different groups of years. During a time of great industrial and speculative activity, the country will for two or three years make good use of all the money available. On the other hand, when a time of depression comes, large amounts of cash are out of employment and accumulate in New York to constitute a disturbing factor of considerable moment.

After seeing the existence of decided variation in the need for money, let us proceed to consider the evils which may be expected to flow therefrom. The first effect evidently is to cause alternations of high and low bank reserves. From these alternations of high and low reserves, follow alternations of ease and stringency in the loan market, and from these latter, in turn, flow various evil consequences. Those to be considered here are two, namely, the insecurity imparted to business and the increased difficulty of protecting the gold reserve of the country. That stringencies in the loan market are productive of great losses and many failures, is too well known to need elaborate proof. When we remember that a large share of the business of the

country is carried on with borrowed capital, it must be evident that a sharp advance in the rate of discount, or a hardening of the market which makes borrowing with ordinary security altogether impossible, will entail much loss and, not infrequently, cause bankruptcy.

The influence of an inflated circulation,—a plethoric condition of the bank reserves,—in rendering more difficult the protection of the gold reserve is important to notice. That such a state of things tends to lower the rate of discount, hence to incline the capitalists to take their money elsewhere for investment, and thus, in the end, tends to drive out gold, is a course of reasoning familiar to all students of monetary questions. This reasoning is abundantly confirmed by experience.

We may conclude with a brief account of the various experiments which have more or less fully tested the alleged advantages of an elastic currency. Emergency elasticity has been tried in England on three important occasions, 1847, 1857 and 1866, and with signal success. In like manner, the idea in various forms has been repeatedly experimented with in the United States. One method employed here has been for the treasury to pre-pay interest or buy in bonds. Another is the well-known issue of clearing-house loan certificates for the settlement of bankers' balances, thus releasing money for general use. Although the working of these various expedients has not been entirely satisfactory, there can be no doubt that they have done good service in mitigating the evils of several commercial crises.

In like manner, experience has shown the usefulness

of ordinary elasticity, that is, elasticity which tries to provide in ordinary times for the adjustment of the supply of money to the need for it. Evidence on this point is furnished by the smooth working of the Canadian system. So, also, a comparison of the rates of discount for a series of years in London, Paris, and Berlin, shows that the fluctuations are least in France, where there is greatest elasticity, and greatest in London, where there is least elasticity.

Finally, the Bank of England has more than once during the last few years proved the efficacy of a contraction of the circulation to protect the gold reserve. Her method of doing this has been to sell or hypothecate some millions of consols, in order to absorb the free money on the market and so raise the rate of discount until the gold export was stopped.

The general conclusion to be drawn is that, though an elastic system could not be expected to realize the sanguine hopes of some of its advocates, still it would doubtless be a great improvement on the present order.

Discussion.

N. H. Motsinger: In contemplating the matter of the elasticity of the currency, I do not think we should lose sight of an essential element, the fundamental nature of money. Some of us believe that the quantity of money furnishes the basis of prices, and the Constitution of the United States turning over to Congress the right to coin money and regulate its value, is very suggestive of an elastic currency. I would like to ask the

gentleman how Congress can regulate the value of money, meaning of course its purchasing power, without having the power of regulating the number of dollars available for circulation? Would it be safe to entrust this elasticity of the currency in the hands of private corporations who might be interested in pulling the wrong end of the string? I happen to be a little bit associated with the money interest of the State, and during the panic of 1893 was quite interested. I could not get money from this New York plethora he speaks about, even on government pension checks.

There is a growing school of economists who consider the dollar as not composed of metal material at all, but as one of the equal parts into which the human sacrifice of a nation as represented by property, is divided by the number of dollars. The material dollar whether of gold, silver or paper only represents one of these equal parts, which may be larger or smaller, as the quantity of the nation's property or money varies.

The Constitution gives Congress the power to regulate the value—meaning the size or purchasing power of the unit of value, and only by regulating the number of representative units of value,—increasing or diminishing the number of equal parts into which the nation's social wealth may thus be divided, can the value of a dollar be regulated. Only in this sense can any material substance such as gold, silver or paper become a measure of value which is an estimated quantity of human sacrifice. The honest dollar therefore is represented by any convenient substance named by law, whose number of legal

units is maintained in constant ratio with the quantity of property to be represented, and constant prices will prove an evidence of constant ratio. Boards of trade in connection with the power of national banks to issue or withdraw currency from circulation, have taken advantage of this principle, greatly to the detriment of producing classes who have trusted the government to coin money and *regulate* its value, while Congress has failed to exercise this vital government function. An elastic circulation in the hands of private corporations means the power to rob the producer. We should all oppose it.

Professor E. R. L. Gould: The phenomena indicating the inelasticity of our currency are interesting, but a practical method of remedying the difficulty is something we ought not to neglect. The best plan seems to me to permit the Secretary of the Treasury to prepare government 3 per cent. bonds, amounting to the entire volume of the currency, hold them in the vaults and issue them against deposits of currency. Whenever money, which as has been shown, concentrates at New York, during certain periods of the year, giving thereby a stimulus to purely speculative transactions or remaining a drug on the market, becomes worth less than 3 per cent., it will naturally be exchanged at the sub-treasury for bonds. So at other periods of the year when a greater amount of currency is needed to move the crops, as well as for other legitimate purposes, money has a higher commercial value than 3 per cent., the bonds will be returned and the currency drawn out.

The European system of great national money institu-

tions which regulate the supply of currency are not practicable in this country. There is a general feeling that too great changes would be involved in allowing private institutions such power. The plan suggested offers a happy compromise. The United States sub-treasuries would perform the function in a perfectly sound, natural and business-like way, and seasonal elasticity would be secured.

Authorization of this kind given to the Secretary of the Treasury would also be of value in protecting the gold reserve. If the amount of the reserve were fixed at say two hundred million dollars,—a sum sufficient to engender absolute confidence—whenever, for any cause, a part was withdrawn, the Secretary of the Treasury could quietly, and without creating apprehension, sell a sufficient number of these 3 per cent. bonds to bring up the reserve to the prescribed limit. Such procedure would be business-like and effective.

Professor Taylor: It seems to me that Professor Gould's opinion is exactly what I should have been inclined to utter if I had elaborated the subject at the beginning. Windom's scheme—I think it was Windom's scheme, in the more recent form at least—seemed to me at the time one of the most promising suggestions that we have had in this country; and chiefly for the reason that, while I would strongly favor a great central bank somewhat under government control, or a great confederation of clearing houses, I fear it is utterly impracticable as a matter of politics in this country. And it has seemed to me that if at this time we would adopt Win-

dom's idea, we could at once relieve the present difficulty; that if we should have bonds issued with the understanding that it did not permanently retire the currency but merely took it into the treasury to be locked up until the people desired to exchange the bonds again for money, it would relieve the present plethora as it has existed for many months and furnish also the necessary power of expansion when the need was reversed. But undoubtedly, there is one very serious objection. The banking community, the business community, wisely distrust governmental interference in this country. They do not wish anybody appointed under the spoils system, to have the power of expanding or contracting the currency in response to popular demands. They think it ought to be in response to business demands. But while the *Chronicle* vigorously opposed Windom's scheme on this ground, and I suppose rightly voiced the sentiment of the banking community, yet it seems to me, half a loaf is a great deal better than no bread, and they could very likely get this, and I am afraid could never get the other.

Professor Frank Fetter: A question arises as to whether, with the elasticity contemplated, the reserves would remain as they now are, when the demand of the business world for a medium of exchange is least; the weight of the superstructure of credit would then only *occasionally* be greater than at present. Or is it believed that the reserves, even when at this highest point, would be less than at present, the superstructure of credit bearing thus *at all times* a larger proportion to them? . . .

. . . It is generally admitted that bank credits, though we do not call them money, operate in the same way upon prices, and there are two ways for a bank to extend its credit, by deposits, and by circulation. Now if ability to expand be a test of elasticity is it not a fact that the system in England is the most elastic of all, Germany and France following, possibly in that order? If that is the case these illustrations would seem to indicate that where the business of the country is carried on with the smallest margin of reserve, there will arise the greatest need to protect this margin by sudden alterations of the rate of discount.

Professor Taylor: I concede that the point last made, in the very last sentence, is plainly true, that one of the greatest reasons why the London market is very sensitive is because there is a very small margin upon which credit business is carried. But I should hardly be willing to consent to the other statement of the possible case of a different definition of elasticity. I should maintain a system of elasticity where the ultimate reserves would be substantially uniform and with but little expansion during the months of idleness and slight contraction during the months of special need. Are the reserves about uniform? Do they show a plethoric condition or a stringent condition? We are to avoid both of these questions with reference to the reserve itself. Outside of that, there would be an expansion and contraction of credit utterly independent, very likely, of monetary considerations, and we do not need to bother ourselves about it. The business men, as such, will look anxiously to

one index of the future, namely, the state of the reserve. They do not know anything about the degree to which the credit margin has expanded, they do not know anything in particular about it; they know in a general way that the credit has collapsed or that the credit is good. What they look at day by day is the state of the Bank of England's reserve, and when that gets a little low they are reaching the danger point. They have in general fixed upon a danger point. We must, if possible, keep reserves from reaching the danger point, and on the other hand, we must keep them from going so far above the danger point that the plethoric condition can occur.

DESIRABILITY OF A PERMANENT CENSUS BUREAU.

BY PROFESSOR RICHMOND MAYO-SMITH, COLUMBIA UNIVERSITY.

Mr. President and Gentlemen of the Association :

I feel it something of a drop, perhaps, in the interest of this occasion, that after having had before us such very vital questions of economic policy as those that were discussed on Saturday and as the one that was brought before us this morning, we should come down to so prosaic and generally uninteresting a question as one of statistical organization; and so as an apology and also an explanation, I desire to say a word as to how it happens that I am presenting this paper on a very minor topic to the Association this morning. It is well known, of course, to the members of this Association, that the census of the United States is one of the greatest

statistical undertakings in the world, and it is also well recognized that it is not altogether on a satisfactory basis.

It seemed, therefore, to some of the members of this Association who were particularly interested in statistics, that it would be well for us as scientific men and particularly interested in statistics as a source of information in almost all our studies to study for a little while the exact position and the needs of the statistical activity of the government, so that if any re-organization is undertaken, the statistics of this great country may be put into such shape that they will be of use to us and an honor to the country. In this paper I have endeavored to put the discussion on a scientific basis with the hope that in that shape it may be worthy of some action on the part of the Association.

It is scarcely necessary to argue at any great length before such an association in favor of some change in the present census system. All are agreed, who have had anything to do with it, that the present system is extravagant, slow and burdensome in every respect. This belief is shared in by such men as Francis A. Walker, Carroll D. Wright and Robert P. Porter. There is, however, an academic side to the question, which it is proper to bring before the association, viz. : What statistical organization is the best in order to advance our knowledge of society and give material for sociology? This is the question I propose to discuss.

The statistical activity of governments is at first mainly for administrative purposes. Military and fi-

nancial considerations lead to an enumeration or estimate of the number of the people or to a description of property. After a while other statistical inquiries are added of purely scientific interest, and this culminates in the activity of such organizations as the Registrar General's office in England and the decennial census in the United States. There has always been some difference of opinion as to how far the statistical activity of the Government should be guided by administrative and how far by scientific considerations.

This question takes on at first the form of the vexed question of decentralization or centralization. By decentralization is meant the historic system by which each administrative department collects those statistics which are of direct interest to it. By centralization is meant the establishment of some sort of central office, which shall either gather the statistics itself, or, at least, exercise some sort of control, so that the whole statistical activity of the government shall be conducted on uniform, consistent and scientific lines. The advantages of such centralization are that it would prevent a good deal of duplication and double work; that the mass of material would be classified and arranged systematically, and that the whole would be more easily made use of by the public.

We have a great example of decentralization in the United States in the numerous departmental bureaus at Washington. We have a great example of centralization in the census. It is centralized in the sense that its organization is self-centered and independent; in the

sense that it covers the entire field of population and economic statistics, and in the sense that the work is all done at one time. This last is a great evil, because it is impossible to do so much work in so short a time and do it well.

After dwelling upon the deficiencies of the present system, the speaker said, in conclusion :

The establishment of a permanent census bureau would seem to be the best solution of these difficulties and in the natural line of development. It would at the very least, give us an organized force and office facilities for dealing with the decennial enumeration when it comes along. It seems possible also that part of the work now crowded into the census year might be distributed and made to fall at other times which would relieve the pressure at the time of the enumeration and give the bureau continuous work. All those investigations which are done mainly through expert agents could certainly be arranged for in that way. There seems to be no good reason why a great part of the work on the industrial side of the census might not be arranged for at other dates, as, for instance, a census of agriculture in the years ending with a 'five,' or a census of mineral resources in the year ending with a 'two.' Special investigations might be undertaken by direction of Congress, or even on the initiative of the office itself. Much more care could be exercised both in preparing for such work and in exploiting the material. We should also find, probably, that the attitude of the officials toward new inquiries would be changed. Under the present

system it is inevitable that the superintendent should resist enlarging his schedule, which is already so unwieldy, with new questions. He is obliged to do it in self-defense.

It scarcely seems worth while to debate the question whether Congress has the constitutional power to create a bureau of this sort. The way in which the inquiries of the census have been expanded, from the enumeration of the people contemplated by the clause of the constitution providing for the distribution of representatives and direct taxes, and the powers exercised by the department of labor, together with the practice of all civilized nations, would seem to be a sufficient answer to that question. With the growing interest in sociological inquiries, appeal to law in order to force an answer to reasonable questions will probably become less and less necessary, especially in case of a permanent office, whose chief would be a responsible man actuated by only scientific motives and jealously guarding any information of a private nature. It does not seem too much to expect that we shall some day have an annual census showing us the great movements, in outline, of social life.

It is to be observed, finally, that such a permanent office would solve the question of centralization or decentralization. It would gather to itself such statistical activity as is primarily of scientific rather than of mere administrative interest. It would not necessarily do all the work. Where the departments could do that better or cheaper, it could be left to the departments. But the

central office could appropriate the results, in some cases supplement the observations and bring all sources of information together in such a way that our present fragmentary and inadequate observations of social life would be systematized and perhaps deserve the name 'scientific.'

Discussion.

Professor Falkner: Professor Mayo-Smith pleads for the injection of the scientific spirit into the statistical work of the government.

The specific advantages of a permanent census bureau are three-fold. It would, in the first place, preserve an organized force of statistical experts. With a permanent bureau we should have permanence and continuity in the *personnel* of those who direct census operations. Secondly, such a bureau would permit a more accurate and satisfactory preparation for the work of the census. This is perhaps the most important part of the census and it is now hurried through in a totally inadequate fashion. Thirdly, we should secure with such a bureau permanent records of statistical experience. In every census operation there are disputed questions arising daily which require a decision. At the present time these decisions are lost.

The establishment of a bureau of this kind, permeated with a scientific spirit, would, I believe, be of great value in the general statistical activity of the United States government, and would raise the tone of the statistical work in the various departments. I think it is characteristic of the excellency of the railroad statistics

of the United States that they are conducted by an honored member of this Association, who has brought into the work of the bureau the truly scientific spirit and the broad view which comes from it. It seems to me, that the time has come, Mr. President, for the scientific men in this country—the economists—to exercise if possible a certain pressure upon the government to elevate the scientific character of its statistical work. I am not here at the present time to formulate before this assembly plans which I should like to submit to the Council, but it seems to me that the assembly can at least approve the idea that if a means of coöperation can be found between this society and the kindred organization, the American Statistical Association, by which the points of view of the economists and the statisticians may be seen and may be brought to the attention of those in charge of the census work, it would be effective. And therefore I ask permission to introduce the following resolutions, with the request that they be referred to the Council for judgment and action.

Resolved, that the American Economic Association express its sympathy with all efforts to improve census methods in the United States; and that the President appoint a committee to promote, if possible, an effective coöperation with the United States authorities in the plans and methods of future census operations.

Resolved, that the American Statistical Association be invited to appoint a like committee to act with the committee of the American Economic Association.

Dr. Lindsay; I would heartily second the resolutions introduced by Professor Falkner. It seems to me that this question of the character of the work done on our Federal census is a very important one, and appeals to every member of this Association, whether a specialist in the field of statistics or not. I have no doubt the members of this Association make greater use of the census material than the members of Congress who prescribe the limitations and character of the work. It is, therefore, incumbent upon us to do what we can to improve the character of this work, whether we believe in the establishment of a permanent census bureau or not. There are many ways in which we can, perhaps, help to improve it. Some Congressmen are very willing to listen to suggestions looking to the improvement of the conditions under which the census is taken, but usually the law providing for a census is passed hurriedly. The law which determined the conditions under which the census of 1890 was taken, was never discussed in full in the House of Representatives; it was passed at a late hour one evening when but twenty-seven members of the House were present, and received very scant attention. Mr. Carroll D. Wright, in an article published in the January number of the *Forum*, has called attention to many of these facts. Mr. Wright also speaks very hopefully of the possibility of having a permanent census bureau established. Whether this can be secured or not, it seems to me at this time, when the preparation for the taking of the census for 1900 has already been talked of, that this Association should exert some influence in

bringing about an early consideration of the question in Congress. Let us have the law which is to determine the taking of the census of 1900 properly discussed at an early date, so as to allow the persons who may be put in charge of the twelfth census, more time to formulate plans. This material is so vital to our studies, in whatever line they may be, that we should have a committee, perhaps a permanent committee, with a chairman and secretary to whom we could all communicate suggestions, which might be embodied in reports submitted to the Association from time to time, and brought also to the attention of the proper public officials.

(On being put to vote, the resolution was referred to the Council).

THE DENSITY OF POPULATION IN THE UNITED STATES IN 1890.

BY PROFESSOR WALTER F. WILLCOX, CORNELL UNIVERSITY.

To determine the density of population, the area and the population of a division of the earth's surface must be known. Since population is reported primarily for political rather than natural divisions, and since the boundaries of political divisions are frequently changed, the area and the population must be determined for the same point of time. The smaller the areas employed, the more clearly do the determinations and fluctuations of density represent the facts.

The sources of information for the area of the United States and its divisions about June 1, 1890, are census bulletin 23 giving the area of the states, territories, and counties of the United States, census bulletin 100 on the Social Statistics of Cities, giving the area of fifty large cities, and United States Geological Survey bulletins 115-118 giving the area of the towns or townships, and counties, of Massachusetts, Rhode Island, Connecticut, and New Jersey. Since there are six of the fifty cities included in census bulletin 100 which are coextensive with counties, these three sources are in some degree comparable. The following table indicates the areas of these counties or cities as given by the two authorities.

<i>City or County.</i>	<i>Area by Census Bulletin</i>	
	<i>23</i>	<i>100</i>
Baltimore City	28	28.38
(New) Orleans	187	37.09
New York	40	40.22
Philadelphia	130	129.39
Saint Louis City	48	61.35
San Francisco	50	15.46

In three of the six instances the variations are so wide as to arouse the suspicion that the areas measured for the two bulletins were not the same. Hence the results of census bulletin 23 have been uniformly followed. A comparison of this bulletin with those of the United States Geological Survey shows less wide but still significant variations in the areas of the counties of the four states and leads me to conclude that, if the latter, giving the results of a careful independent survey, be regarded as the primary authority, an average margin of error of

about five per cent. should be attributed to the county areas in the census bulletin.

The source of information for the population of the United States on June 1, 1890, is the eleventh census. Its results are included in two volumes one on Population and one on Indians. For the general population does not include the persons in Alaska or Indian Territory or on Indian reservations; all such persons were counted by the Indian census. Hence the total population of a state or territory is to be found by adding the results derived from these two sources.

The method for the determination of density of population followed in the census itself, viz., a comparison of the total area with the general population, is not theoretically defensible. The method employed in the present study gives slightly different results for twenty-two states and territories.

The density of population of each of the 2797 counties of the United States (including the parishes of Louisiana and the six reservations of Indian Territory) and of each minor civil division of the four small eastern states has also been computed either by me or by members of the class in Social Statistics at Cornell University. From these a measure of the evenness or unevenness of settlement of a state may be derived. Thus the most unevenly settled are California, Nevada, New York and Maryland, the most evenly settled are Vermont, Indiana, Iowa, and Alabama. No effort has been made to exclude the population of urban districts because their area was unknown.

There are twenty-seven counties in the country with over five hundred persons to the square mile, and of these, eight lie about New York Bay and three about Massachusetts Bay. The remainder are scattered. There are one hundred and thirty-three counties in the country with a density of population of over one hundred, and of these fifty-four, or about two-fifths, form a single belt stretching from the Chesapeake Bay at Baltimore into southern New Hampshire. This belt includes about four-fifths of one per cent. of the area of the United States, and over one-sixth of the population. It is roughly dumb-bell shaped, with one expansion in southeastern Pennsylvania, the other in eastern Massachusetts and the region of highest density in the country lies near the middle of the narrower connecting belt and about New York harbor. Much smaller areas of dense population are found between Pittsburg and Cleveland, between Columbus and Cincinnati, and about Albany. Nowhere else in the country were more than two contiguous counties each with a density of 100.

A rough attempt approximately to determine the density of population of the wards of the various cities of the country, has been made in the eleventh census by a comparison of the number of people with the number of dwellings. Measured by this standard, the fourteen most crowded wards in the United States are all in New York city, and of the twenty-eight wards having over fifteen persons to a dwelling, twenty are in New York City, one in Brooklyn, and two in Hoboken.

A map representing the density of population in the

United States by counties, has been prepared on a plan somewhat different from that followed by the census office. The county lines are followed carefully in every case, the urban population is always included, and each county thus made a unit, a somewhat larger number of groups is introduced, and the results are always verifiable from the official sources.

Discussion.

Professor Mayo-Smith: I wanted to say just a word, and that is in the way of thanks to Professor Willcox for this minute and very laborious criticism of certain aspects of the census, and I speak of it because it seems to me that it marks a direction of work which the scientific men interested in sociology and economics in the United States will be obliged to pursue in a much greater fullness than they are doing now. The facts in regard to the areas of the states and counties astound me, that in a great undertaking like our census, with the millions of money we have spent and with an apparently easy thing to ascertain, according to Professor Willcox's criticism, the result falls so far short of what, in any natural science or applied science, would be absolutely demanded. What Professor Willcox has shown in regard to the areas and average population struck me in a great many other directions in the publications of the eleventh census. For instance, in the first volume of the publication, the superintendent makes the assertion, which is commonly made, that the excess of males in the population of the United States is due to immigration. I had occasion to

set some of my students at work analyzing the relation of the sexes, simply as a statistical exercise, and they took different classes. Among the foreign born in the United States they found naturally a great excess of males, but, curiously enough, when they came to examine the native born of foreign parents, that is, children of the immigrants born on this side, they found also a great excess of males. Still further, among the native born of native parents, there is also an excess of males. The result of a little minute inquiry was to invalidate the statement of the census. That is not scientific. That does not stand the test of scientific investigation.

Another little thing came to my notice. In another part of that volume the superintendent says, the distribution of the children of the immigrants through the United States, that is, of the second generation of the immigrants, is the same as the distribution of the immigrants themselves—makes that bald assertion. I put one of my students at work at that to see if it was true, and he analyzed the different states in the distribution of the second generation of the immigrants, and he found the statement was simply not true; it was inaccurate.

Now, in regard, Mr. President, to the areas of certain counties in the United States, I do not suppose that it is a matter of very great importance in itself whether the area is short or in excess. In regard to the proportion of males to females, that, perhaps, is not a matter of very great social concern in the United States, as to the cause to which it is due. But there are certain data in

the census which are made the basis for a great deal of sociological reasoning, and which more than that are made the basis of the advocacy of changes of the most far-reaching consequences to the people of the United States. I cite a case that has come before us lately, that is, in regard to the change in the standard. A great deal of this whole question about the standard of value depends upon our statistics of the private indebtedness of the people of the United States. We have had an investigation of that sort by Mr. George K. Holmes. I know he is a very conscientious man, an honest man, a scientific man, and he has done the very best he can; but to think that such changes as we are considering in regard to our monetary unit should be made practically to rest upon the investigations of one man, which have not been criticized or analyzed by other people, but which are accepted practically on his authority, it seems to me that that is a condition of things which will only lead to confusion in sociological reasoning and which will certainly lead to disaster in politics.

Professor Willard Fisher: There is one point about which I should like to question the speaker. I understood him to say that the limit of error in the area of the counties is five per cent., and then that, in all probability, the limit of error for larger areas is greater. It seems to me that would depend altogether upon the methods followed in determining the areas of the larger units. If the area of the larger unit is determined independently of the minor units, then I should be inclined to agree with him. But if the areas of the larger units

are determined by a combination of previously determined areas for the minor units, then, there will be a tendency that errors should neutralize each other, and the limit of error will vary inversely as the square root of the number of observations.

Professor Willcox: Mr. President, in answer to the question, the facts, so far as I have got at them, are substantially these. A statement of the areas of the states and territories and of the counties in 1880 was made in a census bulletin issued in connection with the tenth census. To that bulletin I have not been able to get access but its figures for the states and territories are substantially reproduced in the first volume of the tenth census.¹ Now the figures of area in 1890 for the states and territories, with one trifling exception, were the exact duplicates of those figures as given in 1880. We are told, however, that in the interim the areas of the counties as published by the tenth census have been thoroughly examined and revised, although the areas of the states and territories, have in no instance been modified. The area of each state or territory then, has been taken as a fixed quantum, and the counties within it have been remeasured and corrected, but in such a way as not to modify the total. I have no doubt that in this manner very material corrections have been made; in fact, I know of a few, but it is not true, as has been apparently assumed in the question, that the total area of each state and territory was found by summing the corrected areas of the counties but rather reversely, that the area of the

¹ Tenth Census, Population, p. 669.

whole was taken as a fixed point, and the areas of the counties corrected from that basis.

SOME UNPUBLISHED LETTERS OF DAVID RICARDO.

BY J. H. HOLLANDER, PH.D., JOHN HOPKINS UNIVERSITY.

The correspondence of David Ricardo, discovered in England during the past summer, comprises some seventy letters, and is composed in the main of two distinct collections. The first group consists of twenty-four letters written between the years 1820 and 1823, and addressed to Hutches Trower, a Surrey landholder and an intimate friend of Ricardo. Of the twenty-four letters, twenty-two are from the pen of Ricardo himself. The remaining two are written by his son-in-law, Anthony Austin, and acquaint Trower with the sudden illness and unexpected death, respectively, of the economist.

The second collection consists of the missing correspondence of Ricardo with J. R. McCulloch. The word "missing" seems warranted by the frequent evidence in economic writing of the existence of such correspondence, of which the interesting citations from letters "to one of his friends" in McCulloch's sketch of Ricardo, are perhaps the most familiar instance. The collection comprises forty letters addressed by Ricardo to McCulloch; certain critical memoranda, two letters of Ricardo to Malthus, and one of Malthus to Ricardo—transmitted

as enclosures, and the original letter of James Mill to McCulloch, communicating the circumstances of Ricardo's death. In addition to the Trower and the McCulloch collections, several single letters have been found, including one of some personal interest written to Jeremy Bentham in 1811.

It has been possible to trace with some certainty the history of the two collections. The letters to Trower were presented to University College in 1844 by Mrs. Trower, through the offices of Mr. George Bellas Greenough, an associate of Ricardo and a member of the council of University College. They have since remained in their present repository. The letters to McCulloch passed, at the death of McCulloch in 1864, into the hands of his executors, thence into the possession of Mr. Hugh G. Reid, the last survivor of this body and for many years the secretary of McCulloch. In April, 1894, the collection was presented by Mr. Reid to the British Museum.

The letters to Trower were found by the present writer incidental to an examination of the economic collection of University College, made at the suggestion of representatives of the Ricardo family. The letters to McCulloch were traced into the possession of Mr. Reid and thence to their present resting place. Both collections are now in preparation for publication, the British Economic Association having undertaken the publication of the letters to Trower, and the letters to McCulloch forming the subject of a forthcoming monograph of the American Economic Association.

The general character of the letters to Trower may be described as a correspondence with a personal friend, well informed in economic matters, in general but not in entire sympathy with the economic and political thought of his correspondent, but desirous of remaining in touch with his further activities. The early letters are largely a vindication of certain phases of Ricardo's thought from the criticisms of Malthus and Trower. The more considerable part of the correspondence centers in the parliamentary activity of Ricardo.

The letters to McCulloch are concerned with economic discussion rather than with personal activities, for actual acquaintance was the result not the occasion of the correspondence. The earlier letters are in acknowledgment of successive products of McCulloch's ready pen. Regular correspondence followed McCulloch's unqualified acceptance in 1818 of Ricardo's thought, indicated by laudatory notices in the *Edinburgh Review* of the "Principles of Political Economy and Taxation" and "Proposals for an Economical and Secure Currency." Thereafter the letters follow in natural sequence, and constitute a running commentary upon the economic thought and writing of the two men from 1818 to 1820.

The value of this new-found correspondence consists in the added light thrown upon the activity and personality, the parliamentary career, and the economic thought of Ricardo. The letters are in no sense revolutionary. The extent of Ricardo's formal treatises is too great to make such a result possible. But it is the very character

of this writing which renders his informal comment peculiarly valuable, and it is in this direction, as well as in making possible a more vivid realization of the activity and personality of the writer, that these unpublished letters of Ricardo are interesting to the student and essential to the specialist.

THE FORMULATION OF NORMAL LAWS WITH ESPECIAL REFERENCE TO THE THEORY OF UTILITY.

BY PROFESSOR S. N. PATTEN, UNIVERSITY OF PENNSYLVANIA.

The paper contains an attempt to show the changes which the theory of marginal utility has wrought in economic theories. Perhaps the most prominent of these is the emphasis of the momentary forces which determine market values. This tendency has gone along with and is in part the cause of a strong inclination to discard the old normal laws and the concept of a normal economic man.

Taken by itself, the theory of marginal utility would aid a movement away from the concept of an economic man. It allows and demands a more careful consideration of the feelings and motives of individuals than a rigid application of the older economic theories permitted. When subjective standards displace objective standards, the peculiarities of individual men naturally receive more emphasis than the common qualities which the economic man represents.

It should not, however, be forgotten that the theory of marginal utility is but a corollary of the older theory of utility which Bentham formulated. The newer theory has revolutionized the theory of value because market values are the outcome of the play of momentary forces. In this field the older concepts of the science are of subordinate interest and must be reconstructed in harmony with later developments. There are, however, many parts of the science where these momentary forces are of less importance. This is especially true of problems in the theory of prosperity where two epochs or ages are compared. The theory of marginal utility has thrown little light on this part of economic theory and in it normal laws and the concept of an economic man are as useful as ever. As the interest in the broader problems of our civilization increases economists will be forced to resort again to the older theory of utility and to base their deductions on it rather than on the theory of marginal utility. The older concepts of the science, including that of an economic man will in this way acquire a new importance, and by their aid economics can be brought into closer relations to the other social sciences than it now is.

Discussion.

Professor Ross: I agree with Professor Patten that the bearing of the theory of marginal utility has been overestimated and that its limitations will be more and more recognized. The discussion of the standard of deferred payment began about three years ago, and at that

time there was not injected into it the principle of marginal utility. The discussion then related to the proper destination of the surplus due to industrial progress. Soon the discussion was thrown over into the subjective sphere and was there pursued by several writers, but I think the opinion is that it has been without any positive results. It seems, therefore, that the problem now, as at the beginning relates to the proper destination of the surplus attending industrial progress, and has nothing to do with the theory of marginal utility.

Another comment occurs to me, in view of Professor Patten's well known attitude towards sociology. He thinks that the theory of utility, rather than that of marginal utility, is to prove serviceable because we do not need to take into account all manner of men, seeing that society establishes the normal type of men. Now, ought he not to recognize right there a place for some science dealing with the shaping power of society over the individual? Above the individual is a great over-arching edifice of social influence and social control, and only within this structure has he freedom to choose according to the principle of utility. Now, it seems to me that the study of this belongs not to the economist but to the sociologist.

Professor W. G. Langworthy Taylor: I heartily agree with Professor Patten about the normal man, but I cannot follow him to the extent that some different conception should govern us in time, from that which governs us at the moment in matters of exchange. Dr.

Ross said that the contention has been in recent literature about the distribution of the surplus. His conception appears to be that there is a surplus in society which is exempt from the laws of value. It seems to me that this surplus, being a common mass with the rest of society's products, is contended for by orders of producers in exactly the same way as any other portion of the existing wealth in society, namely, according to the laws of value. If we have once established laws of value under the marginal theory, that theory can be extended to the distribution of the surplus and have effect in time.

Professor Patten: I would give just a word of explanation on that. If I said "different" I simply meant that in time relations we had additional elements. It has got to have a broader basis. It is not that I want to set the two things over against each other, but merely that, as economists, if we are going to follow the lines that we have started here in America, we must be broader in our conception of those respective values.

Professor Sherwood: It seems to me that this application of the theory of utility and the theory of margins, or of marginal utility in particular, is nothing more than a certain form of thought, and that it is perfectly possible to study not only certain phenomena of the market, but to study all phenomena of society from this standpoint, and for this reason, that with whatever conditions the individual is confronted and whatever the social forces which shape the life of the individual and his

action, the actual choice of the individual, or if that word is not correct, the actual course of action of the individual, may be expressed in terms of the utility to the individual of the result of different lines of action. It may be said that the social control, the power of society, compels the individual to do this and this. That is true, but can not this be expressed in terms of the utility to the individual of the consequences of that course of action? If the mastery of society over the individual amounts to such a control that life becomes intolerable—I go to even that extreme—we may express in terms of utility this condition which confronts the individual. And if it is intolerable, the motives which drive a man to suicide, out of the society, out of the life, this is also capable of being expressed in terms of utility, or of a negative utility if you choose.

PAWN SHOPS AS STUDIED IN CINCINNATI.

BY H. A. MILLIS, INDIANA UNIVERSITY.

The growth of large cities is having a great influence upon our banking system. In a simpler civilization a man did not need to borrow often, and when he did borrow it was from an acquaintance. Now nearly every man must sometime in his life borrow money. The few rich and well-known men can get it from the general banks; the owners of real estate from building loan associations or some other agency making loans upon

real estate; but the great majority of the city's population, being neither well-known nor owning real estate, is compelled to go to the pawn shop or to the mortgage loan agency and get its loans by pledging personal property.

The state of Ohio a few years ago passed a law regulating the pawnbroking business. The pawnbroker must register each transaction, noting the number of the ticket given, a description of the article given in pledge, the amount of the loan made, the time at which it was made, and to whom made. A daily report giving these points is filed with the chief of police. The law also prohibits loaning upon pledge to minors, feeble-minded or intoxicated persons, and criminals. This law, enforced as it is, well regulates the business in most respects. But, rather curiously, the state does not regulate the interest charges at all.

In Cincinnati the interest charges are not uniform and are very inequitable. The rates are from three to ten per cent. per month (and in some cases still higher), varying according to the amount of the loan and to whom it is made. Custom has, in a way, fixed the rates at ten per cent. per month on loans less than \$20, five per cent. on those between \$20 and \$50, and three per cent. on those above \$50. But this scale is not always adhered to. The old customers and acquaintances of the pawnbroker can get loans on fairly easy terms, while the strangers and the "hardest up" have to pay extortionate rates.

This brings several questions before us. The two

most important are—are not these rates entirely too high? and cannot something be done to make them more equitable?

At first it seems the rates are too high, but upon closer examination it is seen to be doubtful if the business could be carried on with a much lower rate. Foreign countries having municipal pawn shops charge from four to fifteen per cent. per year. But we cannot adopt these rates for the business of our pawnbrokers is not so large and they do not have a monopoly. Municipal pawn shops could charge less, but our public is not yet ready for these.

We might, however, regulate the charges to be made in such a way as to make them more equitable, and at the same time much lower for the great majority of pawners, the poorer classes who get the small loans, without very materially affecting the business of the pawnbroker.

Discussion.

Dr. Lindsay: In Pennsylvania, the pawn shops are allowed to charge $5\frac{1}{2}$ % per month, but that law is not enforced. I would like to ask the speaker how a law regulating the maximum charges can be properly enforced. Another question that arises is how to make pawn shops of any value from a philanthropic point of view. The New York experiment has been very conservative in the matter of taking goods, taking only a certain class of goods, and equally conservative in the amounts loaned. In New York the pawnbrokers are not allowed to sell unredeemed goods over the counter.

Therefore an appraiser has to value an article at what it will bring at an auction sale. The New York association then loans 90 % of the appraiser's valuation. The people who are actually using the New York Provident Loan Association are not the most needy people. They are often people who could probably obtain loans in other ways, and the poor people who have very little to offer for security are not helped in that way. The Massachusetts scheme, however, has helped this class. It began under peculiar circumstances. The Massachusetts state law enabled that society to operate on a chattel mortgage plan. That is not the case in Pennsylvania, and although we had an association formed there, and capital subscribed amounting to about \$70,000, we had to petition the legislature for a piece of special legislation before we could undertake anything approaching the chattel mortgage plan, and the legislature did not grant the request.

Mr. Millis: When I suggested that the maximum rate might be fixed by law, I referred to Cincinnati and Ohio, where they already have the pawn shops under police supervision. The pawnbroker has to make a daily report to the chief of police, and it would not be very much more trouble to put down the amount of the loan made and the charges, and since they are under police supervision, I think it could be enforced very well.

THE FALLACY OF SAVING.

BY HENRY R. SEAGER, PH.D., UNIVERSITY OF PENNSYLVANIA.

The "fallacy of saving" is a phrase which certain recent writers have employed to express the thought that the unregulated saving of individuals has disastrous social consequences. They repudiate the notion that universal thrift can be a remedy for social ills.

The classical theory of saving depended for its validity upon the identification of capital with the wages fund. Saving meant simply increasing the size of the wages fund. What capitalists saved, laborers consumed, and thus the balance between consumption and production was always maintained. Over-production was impossible.

Such a simple theory is no longer tenable. Modern analysis identifies capital with the instruments of production. Saving involves permanent additions to the fund of productive wealth and such additions may conceivably lead to over-production.

Orthodox political economy denies that over-production actually will result. In the first place it recognizes that a certain amount of saving is necessary to maintain intact the existing fund of productive wealth, inroads into which are constantly being made through (1) the destruction of capital due to accident, miscalculation, and fraud, and (2) the over-spending of individuals. Moreover, (3) a growing population calls for an increasing fund of capital unless the efficiency of the industrial mechanism is to be reduced. If saving is carried beyond

the limits set by these normal needs of the industrial organism, the result, according to the common analysis, will be to lower the rate of interest. This lower charge for the use of capital, reduces the expenses of production and results in a general fall in the prices of commodities. The checks to over-saving and over-production upon which political economy relies, are thus, two: (1) a fall in the rate of interest which will check accumulation by weakening the motives to saving; (2) a fall in prices which will stimulate consumption to keep pace with the increased production.

The critics alluded to question the efficiency of these checks and maintain (1) that increasing the stock of capital leads to increased speculation rather than to a lower rate of interest, and (2) that lower interest charges are not reflected in lower retail prices but lead only to increased extravagance on the part of retailers in advertising, etc. Since the volume of consumption can only be affected through changes in retail prices, they conclude that increased production due to increased capital will not find an outlet in increased consumption.

For these reasons, they assert that capital may be accumulated in excess of the needs of the industrial organism for productive wealth, and that consumer's goods may be produced in excess of the effective consuming will of the community. That these phenomena actually arise they regard as conclusively demonstrated by the repeated occurrence of commercial panics and business depressions.

This analysis, overlooks certain important considera-

tions. In the first place, although it is undoubtedly true that increasing the fund of capital encourages speculation at the same time that it forces down interest, yet this does not modify the conclusion that adding to capital automatically sets in activity causes tending to subtract from capital. Increased speculation means simply an increased proportion of losing investments and hence of positive destruction of capital. It acts therefore as a direct check to the excessive stimulation of productive wealth just as a lower rate of interest acts as an indirect check through its influence on the motives which lead to saving.

Secondly, it is not true that a lower rate of interest is not reflected in lower retail prices. Although retail prices respond less rapidly than wholesale prices to changes in the expenses of production, yet observation and statistics both conform the opinion that they do fall as wholesale prices fall.

The fact that more is now spent for advertising purposes than formerly, does not mean that competition between retail dealers no longer acts through prices. Consumers can afford to pay larger advertising bills because in this way they concentrate production and reduce its expenses to a minimum.

Moreover, the tendency at present seems to be rather in the direction of more effective price competition between retail dealers than in the reverse direction. This tendency shows itself in the increasing number of large department stores which supply all kinds of articles to consumers and content themselves with a narrow margin

of profit of large sales. It appears also in the increasing number of coöperative distributive stores which bridge over the gulf separating producers and consumers and enable the latter to reap the advantages of any increase in the efficiency of the former.

Such statistics as we have, contradict the theory that retail prices do not fall in response to reductions in wholesale prices. The report compiled by Professor Falkner for the finance committee of the Senate, on wholesale and retail price variations in this country, shows that during the years 1889 to 1891, wholesale prices fell on an average .33 of one per cent., while retail prices fell .64 of one per cent. A detailed examination of the report shows that retail prices fell very generally as wholesale prices fell, but that they responded less readily to a rise in wholesale prices.

The strongest proof adduced in support of the view that over-saving and over-production occur, however, is the existence of commercial panics. Such disturbances are said to be due to over-production. Obviously, over-production, if it did not occur would result in business panic. As a matter of fact, a careful study of the more important panics of recent times, reveals other more probable causes.

There are always slight discrepancies between production and consumption in particular parts of the industrial field. A panic arises when these particular discrepancies are aggregated and a serious lack of adjustment between producing power and consuming ability results.

This may be brought about by a change of tariff

policy, a flurry in credits, a foreign war, a domestic crop failure, or any other of a great many causes which have in times past singly or together brought about industrial disturbances.

If panics are due to over-saving and over-production, it behooves the exponents of this view to show that these phenomena really preceded any important panic. This they have failed to do.

Discussion.

Professor Bemis: This paper appears to admit the theoretical possibility of too much saving—a notable admission, which I will not here discuss—but holds that it would not be likely to occur, because, in various ways, saving will be checked.

Instead of the fall in interest diminishing saving, however, as contended in the paper, saving may be even stimulated by a desire to retain a fixed income and by the development of foresight and of the desire for social prestige and power. Dr. Seager also holds that saving will be checked by increased consumption by the masses as their wages rise or prices fall. But in the manufacturing industries, statistics of the last two censuses, perhaps not very reliable, quoted by Carroll D. Wright in his recent work on the Evolution of Industry in the United States, appear to indicate that wages are becoming a less and less proportion of the product, because, in spite of the fall in interest rates there has been a rapid rise in capital per worker. This antagonizes the famous claim of Bastiat and Atkinson that labor gets an

increasing—relative as well as absolute—share of the increasing product and would lead to the conclusion that the wage worker can hardly increase his consumption enough to answer Dr. Seager's anticipations, if I understood him aright.

COST, SINGULAR AND PLURAL.

BY PROFESSOR W. G. LANGWORTHY TAYLOR, UNIVERSITY OF
NEBRASKA.

My observations run along similar lines to those of Professor Patten of yesterday afternoon, and are motivated by a somewhat similar stimulus, namely: expressions in current literature derogatory of the usefulness of the marginal theory of value—expressions which have magnified the cleft that can be, perhaps, introduced into that subject, so as to go almost to the extent of denying the possibility of generalization in economic theory—and actually reaching the conclusion that the only solution of the question of deferred payments lies in considering which classes in the community it is expedient to favor. Now of course that is very different from the ordinary concept of an economic norm, or economic law. An economic norm should be such a rule that while it does not, perhaps, favor the immediate interests of different persons, as viewed by those persons themselves for the moment, at the same time it is a rule which ultimately and in the long run is for the greatest benefit of each and of all. Of course that would be hard to prove ab-

solutely and yet I believe that it is so. The first part of my paper then is upon the relativity of cost. I show that in all times there has been a popular conception of prosperity, that the economic conception of prosperity is founded simply upon the popular conception, that economic laws or economic discussion or economic rules—yes, perhaps, laws—are simply a delimitation of popular conceptions, and that the singular or monadic idea or concept of prosperity in the community justifies its use by its use, that is, by its utility. Logically this statement is really nothing but a statement of the relativity of truth. If we are to compare one time with another time, it must be by monadic or solid individual concepts of one time as compared with another time; and that must enable us, as a corollary, to conceive of a total value at one time, and a total cost at one time, and a total surplus.

In the second part of my paper, I go on to justify the utility of the new concept of value by showing that actually, as a matter of fact, it is a continuous and complete concept which justifies itself by the fact that it unifies every use which we wish to make of it. Now the highest object of any investigation is to make a system; the only test of truth is the resulting in a system; and if it can be shown that a system is here created that is more harmonious and more comprehensive than any other system, then that very demonstration in itself proves the truth of the unifying instrument.

Since particular costs and values do not precisely correspond in every case, it is necessary to prove a law of

continuity which shall bind together total and particular costs. The old and useful concept of exchange value fails at this critical point, where it is most needed. If we can regard values as areas rather than as ratios, the continuity is made clear. Diagrams represent values as segmental areas arranged in circular form. The variations of the segments show graphically at once the ratios and the total areas. It follows that any change of value, whether due to cost or reward, may or may not change total value, or may change total value without changing particular values. The concept of value is analyzed into two concepts, simply for sake of clearness.

A SYMPOSIUM.—THE SPHERE OF VOLUNTARY ORGANIZATION IN SOCIAL MOVEMENTS.

PAPERS BY PROFESSOR LESTER F. WARD, WASHINGTON, AND PROFESSOR C. R.
HENDERSON, UNIVERSITY OF CHICAGO.

Professor Ward: All social organizations may be regarded as voluntary except three, namely: (1) society itself, (2) the family, and (3) the state. Society, in its simplest and purest form, is a collective state in which individuals are moved to action by common sentiments, and kept together by unconscious psychic bonds similar to those that control gregarious animals.

The family is a state which cannot be called voluntary, because some, if not a majority, of its members, have not reached the age of judgment and choice. It might have been placed first, because, in one form or

another, it undoubtedly constituted both the basis of society and the state. Finally, the state must be excluded from the list of voluntary organizations, because membership in it is compulsory. Every individual must belong to some national autonomy, and if he voluntarily quit one country, he continues to owe allegiance to it until he transfers his allegiance to another. Excluding these three social organizations, we are obliged to class all others as voluntary, and the field is thus cleared for their consideration. They are so numerous and varied that it would be hopeless to attempt to describe or even to enumerate them. Different speakers will treat them from different points of view. I will confine myself to a very general discussion of their philosophic significance from the standpoint of social economy and sociology.

Looking at the question thus fundamentally, it may be remarked at the outset that voluntary social organization is essentially rational, and is thus distinguished from the three forms of involuntary organization, which are, the first and second wholly, and the third mainly, unconscious. While these latter are products of environmental conditions, and genetically or spontaneously evolved, the former are products of rational calculation, and are intentionally or designedly created.

While the specific or avowed objects of voluntary organization are manifold and varied, there is one general object not avowed and rarely recognized. This general or fundamental object is the attainment of greater social efficiency. This constitutes one of the

chief methods of social progress. Individuals also contribute to social progress, even when working through no organization, but neither the individual working alone nor the organized body aims at this result. The individual seeks only his own interests, and the voluntary association seeks only the specific objects set forth in the constitution of the association. But usually both do contribute to the general advancement of the collective interests of society. This aspect of voluntary organization is as wholly unconscious as the family, the social state or the political state. To this extent the general laws of social development are as much in operation in the rational coöperation of men as in the blind workings of psychic influences that produce family, social and political groups.

We may next inquire as to the manner in which voluntary organization contributes to the increase of social efficiency. While still adhering to the broader view, it may be shown that the well-known principles of organization in general for the purpose of producing a greater effect for the same expenditure of energy, apply to social organization. This statement in and of itself is of course a truism, but taken in connection with a long series of antecedent steps leading up to it, its significance is important, nor is it so apparent as might be supposed when we remember that by efficiency is not meant the mere accomplishment of the specific object for which voluntary organizations are formed, but the attainment of those unconscious and unintended social ends which are only contemplated in the general scheme of social development.

Professor Henderson: Free associations mediated between tribal and political social forms. The family or clan might be self-sufficient for supply or protection, but more specialized and complex communities called voluntary associations into being. The early guilds carried on the spirit and the symbols of the household into mediæval life, and the lodges have inherited those forms. We are dealing with a method of organizations whose roots are deep in the life of mankind. With higher wants, larger freedom, finer tolerance of differences such organizations are multiplied.

The objects of the voluntary organizations are as varied as the wants of civilized man, the satisfactions of sensuous, emotional, aesthetic and spiritual cravings. Such good cannot be procured without coöperation and can not be enjoyed in solitude.

Scientific treatment requires classification of the phenomena. We seek not a biological, but psychological basis for our arrangement, and take as a starting point for a provisional order the dominant purpose of the association.

We may class together in one group those free associations whose members seek the coveted satisfactions within the society itself, and consume their good 'on the premises.' We may find abundant illustrations in the clubs whose characteristic purpose is to procure the pleasures and advantages of physical activity in play. Subordinate purposes of intellectual, sociable or artistic interest may exalt the character of such societies, while injurious and immoral customs may brand them anti-

social. Literary societies are examples of voluntary associations whose characteristic, but not exclusive purpose is intellectual pleasure and growth. Other societies are created and governed by dominant aesthetic purpose. Those whose reason for being is found in the craving for human fellowship usually make music, literature, or games the medium for the expression of the inner life and the vehicle for interchange of spiritual possessions. A second large group is composed of very complex elements, of societies whose members use them to improve the working of established organs of welfare, family, school, press, state, church. Here there must be a larger prevision of consequences, a higher spirit of sacrifice of present to future, of self to society.

There are associations whose purpose is to ameliorate the conditions of life in and about the home; to improve the dwelling, to educate those who have charge of the housekeeping, to foster the home industries, to supply literature and excite literary or artistic taste, and to appeal to commonwealth and nation in defense of the integrity and purity of the family.

Already of vast importance are the rapidly-increasing clubs and associations whose object is the improvement of the institutions of culture. In the West and South our schools were established, before the public free schools were possible, by little groups of adventurous and devoted citizens. In our cities and towns the introduction of art work, kindergartens, manual training, drawing, modern languages and high school courses has been made possible by such voluntary associations. The

university extension movement, with all its promise of culture for adult citizens, is an example of the availability and necessity of this form of organization.

The highly complex good which comes from law and government is the dominant and creative principle in the organization of political parties and clubs. Experience has taught mankind that government has no power of spontaneous life, nor can be expected to work automatically in the service of the public.

The service of religion and charity is promoted by the voluntary organization. The great churches are naturally conservative; sometimes obstructive. Not a single important religious movement ever began, or could begin, by authority of a majority vote in a large ecclesiastical body. The pioneers of denominational schools, the founders of missionary enterprises, the advocates of the black slave, the leaders of great charities, have at first gathered in little groups about enthusiastic persons. When a movement has demonstrated its beneficent tendency it is adopted by religious bodies.

Applying the categories of time and space to the phenomena under consideration, we reduce them to statistical form. The facts of permanence, number and extent of distribution have important bearings on interpretation. From these studies of statistics, descriptive and enumerative, we discover causal connections and natural relations of filiation.

More limited and specific groups can be found within the larger groups by noting the degree of altruism apparent in each, and thus we discover that certain volun-

tary organizations seek to promote some form of welfare simply for their own members, while others labor for the good of the community at large, or for some special class of needy persons.

Here the worth, dignity and scope of the object of the associations must be studied, as declared in the constitutions or articles and as manifested in the conduct of the societies. The value of an organization, from the social point of view, is determined by its contributions to the fullness, richness and quality of the satisfactions yielded in consequence of its activities. The extent and degree of its usefulness depend upon the number of persons affected, the range of territory it covers and the time through which it endures. Each association must be judged by its relative worth as compared with all other available resources of the community.

In their normal working it is fair to say of voluntary organizations that they are useful (1) for the elaboration of thought about social conduct during the stage of uncertain groping and deliberation; (2) for experimentation on a limited field before the entire community is asked for indorsement; (3) for satisfying the particular needs of a limited number in the community; (4) for criticism and direction of established and regular social institutions.

Organizations which act in a way to diminish vitality, disturb order, hinder progress in knowledge or taste, or mar the life of home, school, state or church, must be regarded as abnormal, often as anti-social. The abuses of voluntary associations arise in connection with their objects and their methods.

Vast sums of money are devoted to frivolous or hurtful satisfaction; inferior objects are made supreme; the interest of a few is sought at the expense of the community. There is an undue multiplication of societies, a duplication of agencies, antagonisms and rivalries, which waste the resources of benevolence, selfish exploitation of society for the benefit of salaried agents, and attempts to usurp the functions proper to the state.

Dr. Lindsay: If we make a general survey of the phenomena of organization it seems to me that we shall have to make three instead of two general divisions: first, purely voluntary organizations; then a class of semi-voluntary—or semi-compulsory organizations, then the involuntary organizations. Professor Ward has already alluded to the three chief examples of the involuntary organization; but all the others cannot fall properly into the class of voluntary organizations. We have, for instance, the church, which is a quasi-voluntary organization in some countries if not in all. In countries where the Roman Catholic church, for instance, dominates, where the children of members are reckoned as members of the organization and usually remain so, it cannot be classed as a purely voluntary organization. Other types of organization, passing into the institutional stage, are plainly only quasi-voluntary.

The civilization of a country is often best characterized by the number and variety of its purely voluntary organizations. They usually vary, I think, in proportion to the general fund of social energy seeking to find adequate expression in a given society.

In our own country voluntary organizations have achieved great results, first, along the line of politics and legislation. I think Professor Giddings is responsible for the statement that something over 75 per cent. of all our federal legislation owes its origin and successful enactment to some form of voluntary organization that is back of it. Mr. Simon Sterne, of New York, says that in his experience in legislative and political reform work in New York City, scarcely a forward step has been made that is not attributable directly to the efforts of some organization of individuals who sought to bring it to the public attention, to concentrate the social energy of the community in one particular line. In this city of Indianapolis, I am told that five years ago there was not a paved street, and that it is due to the efforts of the Commercial Club that this city has been splendidly paved at an expenditure of something like \$4,000,000, within a period of five years.

Secondly, in the realm of science and education, wherever the chief efforts are left to individual enterprise, we find good illustrations of the efficiency of voluntary organization, and we find it usually in proportion to the efficiency of the general educational system.

In all general social activity, voluntary organization is the great alleviator of social discontent. In other words, those factors in any community which do not find recognition through the regularly constituted channels, find some recognition, some self realization, some chance at self assertion, in some form of voluntary organization. The natural cure for social discontent is

through an extension of the sphere of voluntary organization.

The corrective action of voluntary organization in its relation to government must not be overlooked. Carried out fully this thought leads at once to a discussion of the forces at the bottom of socialism. We are constantly taunted, when any proposition looking toward centralization is made, with the statement that it is socialistic. Now, as society progresses, there always will be a steady movement toward some kind of socialism, but there will also always be a steady movement in the opposite direction. We must find some equilibrium between these two tendencies, these forces moving in opposite directions, before we can attain the best realization of political rights and political freedom. It is to the corrective feature of voluntary organizations and to fullest reciprocity between them and the regularly constituted authorities or channels of social action, that we look with the greatest confidence for this equilibrium.

Voluntary organizations are constantly passing through a development. After they have accomplished something in their experience, after they have demonstrated something, they are tending to become semi-voluntary, quasi-voluntary organizations, into which a certain portion of the community is more or less forced to go. There is a social pressure brought to bear to bring individuals within their boundaries. These semi-voluntary bodies then often tend to hand over their functions, their results, to regularly constituted channels, to organizations that are perhaps involuntary. A purely volun-

tary organization, for instance, was formed in the city of New York, by certain persons interested in the question of public baths, who thought it desirable to have public free baths in the city. A voluntary organization to bring that about was formed; its members raised money for the purpose; they demonstrated that the public did appreciate and even demanded the public free baths. Later the matter was handed over to the city authorities, who have taken up that work, and the voluntary organization ceases to exist. It seems to me there we have an illustration of one line of development that voluntary organizations may take, and that in all these considerations we see the work which the voluntary organizations may perform, their importance, and the need of increasing their usefulness, of encouraging them; because unless we fully appreciate the basis of such organizations we may sometimes be callous to the claims they make upon our time, upon our services, and upon our contributions.

Hon. W. D. Foulke: I believe the most valuable kind of voluntary associations are those which are quasi-political. Indeed, our great political parties themselves are voluntary associations. But possibly the most important function of all of such bodies is found in the work of agitation, in forming a nucleus of public opinion in regard to some question about which it can gather as a preliminary step to its embodiment in legislation. The anti-slavery society had more to do with preparing public sentiment for emancipation than probably any other single agency. The National Civil Service Re-

form Association has done much to take our politics from the grasp of the spoils system. The Pendleton Act was prepared under its auspices. The people of Indianapolis had an opportunity to see the results of the work of a very small association devoted to that cause, not many years ago. We had in this state an insane hospital which was under the control of men who used the places in it solely as political spoils, appointing men without any qualifications, simply on account of their ability to control the politics of the ward. Contracts were made with political confederates by which the insane were furnished with foul and unwholesome food; cruelties were perpetrated upon them. The object lesson was there; the examples were before us, men who had been injured and maimed, even killed, scalded to death, as one of the results of the vile spoils system under which that insane hospital was then suffering. There were a few of us, without any authority from the law, organized into a body called the Indiana Civil Service Reform Association. We made our investigations; we had no right to subpoena witnesses; but who wants to do it, who has his heart in the cause, can find out a great deal by methods that are unauthorized by statute. The result was that the public conscience of Indiana was so awakened that this thing contributed more than any other single element toward overturning the party by which these iniquities were perpetrated, and finally we have reached a condition of affairs where we trust they are no longer possible. So I believe that of all kinds of voluntary associations those are most useful which are de-

voted to the propagation of various kinds of political, and social reform, and that so long as any of the duties of the state can be performed by such associations it is quite as wise as it is to have them performed by official machinery.

Professor Ward: The discussion has, as I expected, brought out many points which I would have been very glad to consider if I had had time to work them into my paper. I will just glance at the objection made by Professor Lindsay, that there are other involuntary organizations than those which I mentioned. First, as to the church which sometimes punishes its members, I should say that where the church really assumes such powers it is more properly, a part of the government; it assumes gubernatorial powers. In the second place, when children are baptized in the church under the age of judgment, it then performs the part of the family. However, I am prepared to admit that the church might be regarded as in some respects an involuntary organization. I believe the suggestion was made that political parties may also be so regarded. Membership of political parties is a very vague thing, and it would seem that some people were born to their political party. But there is this difference in both these cases, the church and political parties: one can leave the church without going into another church; and one can leave his political party.

An important point was brought out on the other side of the question, viz., that the state itself may, in a certain sense, be regarded as a voluntary organization. I

have maintained that the state is at bottom the result of the recognition of its advantages; and there is one pretty crucial proof that the state would be organized if there were excluded all considerations of power and emolument. Vigilance committees, such as we have had in our western territories, are simply cases of incipient government, originating from the determination on the part of the adult and intelligent portion of society that crimes and outrages committed by desperadoes beyond the reach of the law, cannot be allowed.

It therefore seems that government would originate itself at least, for its own protection, because such vigilance committees are not actuated by either love of power or hope of emolument.

One important point was touched by the last speaker, which, if there were time, I should be very glad to try to meet, and that is with regard to the extension of the state functions. Now I think there is a prevalent misconception as to what is involved in the modern demand for the extension of state action. The only thing we have with which to compare it is the old autocracy of past times but to my mind, it is as far from that as night is from day, and I believe it is to be contrasted instead of compared with it. We are tending towards larger state functions but not towards autocracy. We are moving away from autocracy and despotism and everything of that kind. The goal toward which we are moving, instead of autocracy, I would call sociocracy, which is simply society taking its affairs into its own hands.

Dr. Lindsay: I would like to ask Professor Ward

whether in addition to involuntary organizations in his classification he does not think it would be wise to recognize another group of organizations. For instance, in Germany certain classes of workmen are compelled by law to be insured. Since that law applies to certain occupations, a man may change his occupation and still be a member of the German state, a German citizen, and not be compelled to form a part of one of those organizations. Another case in point, where the element of law does not come in, is where the trades union sentiment is very strong and a workman in a certain trade finds the social sentiment and the consensus of opinion in that locality such that he is practically forced to become a member of a trades union. Now membership in an organization of that kind is not, for that individual at any rate, a purely voluntary matter. There are a great number of organizations of all kinds, many social ones, literary ones, educational ones, political ones, that have in them the element of compulsion, because certain members could not maintain their position in society unless they did take part in those organizations. It is this group of organizations that I think we should properly classify as semi-voluntary or quasi-voluntary organizations.

Professor Mayo-Smith: I must confess that I do not get clearly into my mind the classification that Professor Ward adopted, or the real distinction between voluntary and involuntary associations. Professor Ward said there were three involuntary associations, I believe—society,

the family, and the state. I do not get clearly what he means by society as an involuntary association.

One other thing, I think is a matter of great importance, and that is the sphere of voluntary organization in regard to social movements. It has been said here this morning, and is very often said, that the action of the state is becoming more and more socialistic, and that may be interpreted as meaning that these voluntary associations perhaps may become of less importance. I think that is altogether a mistake. The movement of all civilization is towards voluntary association in this sense, that all civilization has for its basis the development, more and more, of character. That is what voluntary association develops,—the character of the individual. That is the real benefit of our voluntary associations. That is why it is well for us to join the charity organization society, to belong to the church, to belong to a musical association, even when we are not musical, to belong to the civil service association; not so much what we accomplish, as the character that is developed. Now it seems to me that voluntary association in that sense becomes more and more necessary, and that no socialistic action of the state, no development of the state, will ever free us from the necessity of this development of the individual character. As soon as the extension of state activity makes people believe that it is less necessary for them to take part in social movements, just so soon the state will become the autocracy that Professor Ward speaks of, as the old form of the state. The moment the state becomes an autocracy

to relieve the individual of responsibility, why, then we begin the downward road, as all would doubtless acknowledge. So that I believe this talk about the extension of state activity is very hurtful and very harmful, because, to the public mind, it seems to convey the notion that things are going to be done *for* us instead of being done *by* us, and that is a fool's paradise.

Dr. E. V. Robinson: The opposition between autocracy and democracy, of which Professor Ward spoke, seems to me unreal. The distinction is mainly one of arithmetic. Does any one suppose that France has ever ceased to be ruled by a despotism, whether the nominal ruler has been one man, or half the people plus one man? Or is black-mail any the less black-mail because practiced by Tammany chiefs and state legislatures, instead of the Roman Emperor Tiberius? Whether the results be good or bad, the nature of governmental activity is not to be changed by any arithmetical process applied to the nominal rulers.

In point of fact, an ideal autocracy, like an ideal democracy, is a product of a heated political imagination, and never existed for any length of time, if at all, outside of Rousseau and our own Fourth of July orations. Every autocrat has ended by becoming the creature of bureaucracy or army, just as every democracy, our own included, has ended in the rule of rings and bosses. A pessimist might be tempted to say that the people have merely the choice of sauce with which to be eaten. But taking the most hopeful view possible, it is difficult to see what warrant there is for the assump-

tion so commonly made that whereas an extension of governmental activity has heretofore brought chiefly evil, it is now, thanks to the benign influence of democracy, to bring only good. This is an assumption which touchingly reflects the naïve faith of our fathers that in democracy they had found the long sought *summum bonum*, but it is strikingly in contrast with the most notorious facts of our every-day experience.

Professor Patten: I do not know what the speaker means by the word organization. I always contrast an organization with an aggregate. An aggregate is a body of individuals coming together as they please and not influenced by one another; each individual can do as he pleases without any consideration for the interests or welfare of other persons. But an organization means more than that; it means something that is in its nature involuntary; it means that a man must feel himself under the necessity of belonging to it. If he draws out of the group he will be ashamed of himself, or at least feel that he loses something. The anti-slavery movement is a good illustration. In the beginning there were individuals, merely an aggregate, that impressed upon the public mind certain distinctions relating to the rights of man. In a little while men began to be ashamed of themselves if they did not get on the side of free labor. Just as soon as that state of affairs exists the involuntary part of the movement begins. In our trade organizations the same thing is to be seen. Workingmen are ashamed not to belong to a trade organization. That is then a form of involuntary action. I feel in the

same way about our scientific societies. There are many who look upon them as mere aggregates, but it seems to me the time for that is past. A man in our line of work, or who has an interest in public affairs, should be ashamed of himself for not taking part in this organization. A man interested in social affairs should be ashamed of himself if he does not belong to every social organization. Now, I confess that I belong to quite a number of organizations for no other reason than that I am ashamed to have it known that I am not interested in them. This I believe is the essence of an organization. When people feel that they must belong to a movement it becomes an organization, but not until that state of affairs is brought about. How strong this feeling is in any given case seems to be partly due to the length of time the organization has been in existence, and partly to the necessity of the organization to society as a whole. There is no reason why a great many of the organizations that we look upon now as merely voluntary aggregates may not in future become permanent elements in society, to which more attention will be given than is now given to the family or to the state.

Professor Albion W. Small: Two or three matters of technical interest have been suggested in this discussion. The first was in Professor Ward's opening words, namely, the mystery of the familiar. One of the things which the sociologists are trying to emphasize is just this, that the things with which we think we are most familiar are most mysterious to us, and that we need to get to work and observe them and classify and organize

our knowledge with respect to them. The near social facts have a vast pedagogical interest, not only for sociologists but for all classes of teachers. The old pedagogy was a pedagogy of the distant, which ignored the importance of the near. Now we are trying as sociologists to call attention to the wisdom of analyzing these things that are about us, touching us at every point.

Then, second, I wish to refer to the suggestion that Professor Ward also made, of the function of these voluntary associations as a part of the cosmic process. They are not something that are mere frills and flourishes and ornaments of human life, but they are carrying on the process of cosmic evolution into the higher stages of human development. Dr. Henderson in his analysis suggested tentatively some of the ways in which this process is being carried on by the voluntary associations.

Now, third, these voluntary associations, as Professor Mayo-Smith has so forcibly said, first give a sense of personal responsibility to the individual and then they afford a leverage by which the individual may use his personal responsibility. I endorse most heartily what Professor Mayo-Smith suggested about the fallacy and the vice of anything socialistic, if we look upon it as a specific. But I want at the same time to register my belief in the desirability and the serviceability of whatever is *social* in its spirit. The possibility of a voluntary association gives to us as citizens an emphasis upon the fact that we are the responsible part of society.

The voluntary association furnishes the impulse and the sense of responsibility and secures a leverage by which that sense of responsibility may operate.

A SYMPOSIUM.—PRESENT OBSTACLES TO THE ADOPTION OF BUSINESS METHODS IN MUNICIPAL ADMINISTRATION.

PAPERS BY HON. FRANKLIN MACVEAGH, OF CHICAGO, AND CLINTON ROGERS WOODRUFF, SECRETARY OF THE NATIONAL MUNICIPAL LEAGUE.

Mr. MacVeagh: Present obstacles to the introduction of business methods in city government divide themselves into two classes: First, defects in charters and other legal equipment; and, secondly, deficiencies in volunteer support by the people—support which cannot be supplied by laws or constitutions.

By "business methods" I assume we mean good methods; which have come to be called business methods because the corrupt, wasteful and partisan methods of unreformed city government have proven themselves conspicuously unbusinesslike, and, therefore, incompetent. I shall, in the form of a summary, and with little or no discussion or comment, enumerate those features of a city charter which are most favorable to the introduction of business methods.

First, executive independence. The independence of the mayor, and, under the mayor, the independence of each head of a department. For this the executive work of the government must be wholly in the hands of the mayor; and all appointments to office, in the executive departments, must be made by the mayor without confirmation of the council.

Second, executive responsibility. Just as the mayoralty is filled by one man, not only for the sake of greater

executive efficiency, but also to concentrate and make definite the responsibility of mayoralty action, so each department, for both these reasons, should be presided over by one man. Executive boards should not exist in city government. They would paralyze a charter made by the National Municipal Reform League itself.

Third, the restriction of the powers of the council. This is of extreme and critical importance. At present the council is the branch chiefly to be reconstructed. It is the seat of the worst corruption, and the occasion of the worst evils of the situation. It is also the branch which has had the least actual reform, and the least attention from reformers. The charters have advanced very greatly and successfully in respect to the executive ; but the successful handling of the problems involved in city legislation has not very far progressed. The word I especially wish to speak, as to charter reforms, is that the reform of the city council is by far the most imperative—and that the existing evils of city legislation are by far the most crying evils of city government. I shall only indicate general lines of this reform :

1. All executive power and authority should be taken away from the councils.

2. The right or power to initiate the granting of franchises should be taken away from the council.

3. No power should reside in the council to increase assessments for taxation or create debt, except within the strict limits laid down by the constitution and general laws of the state.

4. Common sense rules governing councils, to pre-

vent hasty and unconsidered action, should be incorporated in the general laws of the state.

5. The number of members of councils should be carefully limited.

6. Members should be elected for two years, one-half at a time, on general tickets.

7. One house is enough—to say the least.

8. Members should be paid reasonable and adequate salaries—and should not be expected to steal them.

The fourth great feature of good legal environment is civil service reform—the merit system. This should embrace all appointees and employes, except the chiefs of departments and their private secretaries.

Fifth, is home rule. This means :

1. A charter granted in the general incorporation law of the state.

2. The limits of taxation made by the state constitution and strictly general laws of the state.

3. A constitutional prohibition of special legislation.

4. No appointments of city officials made by any state authority.

Sixth, is election reform.

1. The Australian ballot.

2. Laws governing primaries—bringing primary elections under the regular and rigid control of law as other elections are.

3. A corrupt practices act—applicable to committees and candidates.

4. Separate city elections.

This includes a summary statement of what I believe

is needed in the legal environment and the mechanism of city government—a program of municipal reform which would remove the present legal obstacles to the introduction of business methods.

Now, if the obstacle of obstacles to good city government is the non-participation of the good citizen in city politics and city affairs—and if this is not a mere vague fling at one's neighbors, but a scientific fact, let us inquire why this obstacle exists. I think it is explained by three states of the public mind.

First. There is the feeling of no obligation to take part in city politics and government. Nothing is more abnormal than this, and yet nothing is more common. One would think if a man wished to live without the duties of citizenship he would find a country where government is not done by the people; and that if he preferred a country governed by the people he could not live in it without a sense of his share in the power and responsibility of government. But most of us both refuse to live in any other country and refuse to really live in this; for a man who in a self-governed country doesn't help to govern, doesn't live, but merely hangs on. The saving clause is that at the bottom of our minds most of us do admit the responsibility of citizenship who on the surface deny it; and certainly those of us who rise to political consciousness in occasional spurts show that we might live useful, civil lives if somebody would really wake us up.

Second. There is the customary sentiment toward the city government that it is something apart from our-

selves—something we have a right to swear at as outsiders, feeling that its horribly neglected duties are enough to provoke that saint, 'the good citizen.' It is supposed to be for us, to be sure, but not of us or by us. It does not occur to us to blame ourselves or to think we did it.

The third abnormal state of mind which according to my analysis, leads to the present attitude of the good citizen, is chiefly due to the money-getting spirit of the age, which is to be modified in time.

The remedy is education. You cannot have good city government without energetic good citizens to counteract energetic bad citizens; and you cannot get citizens to be energetic against corrupt public life who do not heartily hate corruption; nor against shocking incompetence and neglect who are not shocked by them; nor against bribery who do not heartily hate bribing and despise bribers; nor against filthy streets and disgraceful sanitation whose lives are not made unhappy by them; nor against prodigal, selfish and partisan waste of the public funds if their indignation is not stirred by it. Therefore, you must first stir the people to see all these things with an abiding consciousness that burns into the brain, and hate them with an abiding hatred that perpetually stirs their resentment. This education has begun. It has begun prosperously and hopefully. New citizens are constantly enlisting in the fight, which is growing warm against the audacious travesty of free government in our cities.

The most essential preliminary is to understand the

problem—to understand the limits and the particulars of what is needed to be done. After that we have nothing to fear; we have only to ‘learn to labor and to wait;’ for whatever is needed will be accomplished by the growing spirit of reform, no matter how long the effort shall need to be prolonged.

Mr. Woodruff: Generally speaking, we have bad city government, and we agree that business methods should prevail in it. The question logically arises: What obstacles then stand in the way of applying business methods to our municipal affairs? Briefly stated, the answer is: (1) American commercialism. (2) The spirit of partisanship. (3) The misplacement of emphasis since the outbreak of the Civil War. (4) An erroneous political perspective. (5) Executive legislation. (6) Want of local autonomy.

Commercialism, or undue absorption in private business, or an undue desire to accumulate wealth, has been the distinguishing characteristic of the average American during the present century, and especially since the Civil War. Now that the people have passed the period of expansion, they seem unable to leave off its habits in entering a period of cultivation. Commercialism leads to the absorption of the best business talent of every community in private business affairs, because the legitimate rewards are larger and there is a permanency of tenure not to be found in public affairs. The honor of public office does not offset these disadvantages.

Commercialism not only leads to the absorption of business talent in private affairs, but also to the diver-

sion of the constructive talents of the community to the same channels. The undeniable constructive ability of the Anglo-Saxon, instead of being employed as in former times in perfecting great governmental schemes, is directed to the creation of great factories, trusts and industrial enterprises generally. Another result is the indifference of the average voter, generally so wrapped up in his business as to forget the few, simple duties of citizenship.

Because most of our state and national taxation has been direct and insignificant, as compared with European taxes ; because they are without navies, armies, and royal families to support, voters have not felt the full effect of high municipal taxation and extravagant and inefficient local government. The fact is that after all that can be said against bad city government, the cost of maintaining it (at least from a financial point of view) is comparatively small and bears but indirectly upon the average citizen. The business man is accustomed to sacrifice a small benefit in one direction to earn a larger in another, and he has carried these principles into his consideration of public affairs. This view might be justifiable from a pecuniary point of view, but not in view of the multitude of interests adversely affected by bad city government.

The influence of commercialism is to be seen in the endeavors of business men to secure public franchises on easy terms, and, therefore, to control the municipal bodies. It is also to be seen in the endeavors of contractors for public work to purchase lax inspection. Again,

it is to be seen in securing official winking at the violation of laws, such as those providing against the use of sidewalks for storage.

That the present lack of business methods is due more largely to these causes, rather than to such as universal suffrage and foreign population, is shown in the experience of Portland, Ore. With its isolated, conservative, cultivated population, abundantly prosperous and with rare surroundings of refinement and beauty, it has evolved the weak and corrupt form of government, unfortunately, common in this country.

Next to commercialism the greatest obstacle is partisanship. Undue emphasis of party loyalty has brought about a transfer of allegiance from public to party interests. The cry, "Measures, not men," arising in the Civil War, always an unwise policy, is especially so in its application to municipal politics. The selection of weak or corrupt men is dangerous to good measures. Great political parties of other countries have been maintained without the support of such machines as are regarded essential here.

An erroneous conception has been formed by the American people of the importance and extent of municipal government. They have come to regard it as subordinate in importance. The first place in their attention is awarded to national and state issues. As a matter of fact, a citizen comes into contact with municipal government in some branch or other many times more than with the state and national government in all their branches. This failure to realize the true function and

importance of municipal government has proved a very serious detriment to its development.

Most, if not all, of the American cities have failed to endow their executive officers with sufficient power to secure a well-rounded, continuous business-like conduct of municipal affairs. They have permitted too much interference by local legislatures in purely executive business. One disastrous effect is that these purely business affairs are made the subject of log-rolling and exchange of favors, and have to run the gauntlet of possible political prejudice and chicanery. It often takes much influence and great pressure to secure the re-paving of a street or to authorize the laying of a gas pipe.

Want of local autonomy is simply the operation, on a large scale, of the obstacle just mentioned. Not only have we erred in the general plan of municipal government, by modeling it to too great an extent on our Federal government, with elaborate checks and balances, a bi-cameral system, and so on, but also in permitting state legislatures to say too much about municipal affairs.

Professor John H. Gray: The chief question is, why do so-called best citizens neglect their public duty? The answer is found in our economic and social history. Our municipal condition is the natural outgrowth of this history. The inability to grasp this fact causes the failure of reform movements. Our theories of government crystallized just before steam and machinery came. These changed not only the economic world with which man deals, but also the man that has to do with this new environment. But the antiquated eighteenth-

century philosophy still dominates the world, so long after the conditions of which it was supposed to be an explanation have disappeared. Thus modern municipal needs and current municipal ideals are so much at variance. We have not only lost decent government in practice, but, we have, also, lost proper standards of government. Reform cries such as "Turn the rascals out," and "Get good men to attend primaries and elections," show this. For, all experience shows that where this is done the only result is to put other rascals in or to put in honest men who become rascals. For instance, the civic federation claimed that some of the rascals were turned out at the last election in Chicago, but by common consent the council to-day is the most corrupt the city ever had.

The false ideas of government have gone to the extent of distorting even our intellectual judgment as to what is proper service on the part of public or semi-public corporations. This perversion of judgment leads us to magnify all that we call "mine," and to minimize the importance of all that we call "ours." The result is not only a neglect of all public duty, but also a failure to appreciate the criminality of such neglect. If this analysis be correct, it follows that the remedy must be a slow and a general one.

Two powerful influences are working for reform. First, the colleges and universities have but recently turned towards the study of this problem. Nothing could be farther from the truth than the popular idea that the universities have no influence on the solution

of such problems. These are scientific questions and can be settled only after scientific investigation by scientific men. The influence of university opinion on questions of state seems very intangible and slow, but it is none the less sure and effective.

The other great influence tending towards reform is the rapid spread of corruption itself. Men corrupt councils for the sake of gain only. If wealth continues to increase and to become more and more concentrated, and the numbers of the poor increase at the same time, we may expect at no distant day the demands of the bribe-receivers to become so frequent and so large as to destroy the possibility of profit to those who pay bribes. When that day comes, the corruptionist will ally himself with the scientific opinion of the universities, and become the most ardent reformer. For the most of men prefer good government as soon as they cease to make personal gain from corrupt government.

Dr. Washington Gladden : The first question is what we should regard as business methods in municipal administration. The answer might be :

1. The organization of the public business in such a way that responsibility shall be clearly defined and enforced.
- 2 The employment in public stations of those who are presumably well qualified to discharge their duties.
- 3 The greatest economy in administration, consistent with good service.

These would be business methods, I should say. In the way of the adoption of each and all of these there are many obstacles.

So far as the selection of the most competent service is concerned, it is evident that the political machines have only a subordinate interest in them. The offices are not regarded as positions of public responsibility and duty; they are regarded as the rewards of faithful work for the party. In short, it may be said that all the interests, traditions, purposes, ideas of the men who make a business of politics are naturally adverse to the adoption of business methods in municipal administration. The more businesslike these methods are, the more rigidly efficiency and economy and skill and experience and responsibility were insisted on, the smaller their opportunity would be.

The great obstacles in the way of the adoption of business principles in municipal government are the political organizations, controlled by the men who make a business of politics. These people are greatly strengthened in their work of obstruction by those who have nothing to do with politics. There are a great many men in all our cities who are both capable and honest, who might render the city efficient service, but who refuse to do so because of the sacrifice involved. When our present mayor took office he made a strenuous effort to secure as his heads of departments several able men, but they declined to come to his aid. By this unpatriotic reluctance to make the necessary sacrifice of ease or gain for the public good the rule of the bosses is continued.

The political machine, whose interest lies in the obstruction of business methods of administration, is also

bulwarked by the abject partianship of the great majority of voters. It is the machine that wins the party victories, and almost everything will be forgiven to those who will lead the party to victory.

Finally, if I may use a kind of Hibernianism, I would say that one of the great obstacles to the adoption of business methods in the city affairs is something that isn't there. The apostle says that things that are not sometimes bring to naught things that are, and we have here an illustration of it. The lack of public spirit, of an active, effective municipal pride and patriotism on the part of the people at large, is the great hindrance to municipal reform. Services and sacrifices are required not only of the few who are summoned to take office, but of all the rest of the citizens. The business of governing a city is an arduous business. It requires of all citizens more than most citizens are willing to render. We are too busy—most of us, with our shops and our merchandise, our briefs and our sermons, to give much attention to this great business of governing the city. We leave that mostly to the men who make a business of it. By so doing we openly confess to them that public interest may be sacrificed to private gain. How can we complain if, when they find themselves in office, they act upon our principle?

Professor J. W. Jenks: In the discussion of the papers that have just preceded, one must approve the emphasis that has been placed upon a proper civic spirit, and the condemnation of bribery; but, on the other hand, the importance of the mechanism of city government has

been somewhat too much minimized. The mechanism itself is of little importance, but it often determines what the public spirit of the citizen shall be. In reform movements we must give good citizens something specific to work for, or we shall not rouse interest. Furthermore, upon the forms of the city government themselves depends to a very great extent the kind of officials that we have. The aphorism, "It matters not if Lucifer frames our laws if only Gabriel administers them," is a happy one, and true. But it is also true that when Lucifer does form a city charter, Gabriel has no chance at all to become mayor. On the other hand the sons of Belial will surely be in the city council. Our city charters then should be so framed that they will tend to give us better city officials. It is much better, if the weak point in our city governments is the city council, to reform it, than to do away with it. Our system of electing city councils very frequently prevents good citizens from taking part in city government; it tends also so to discourage them that they pay little attention to their duties as citizens. If, now, we had a city council elected on a proportional representation plan, then we should find that the civic mechanism would tend to encourage our citizens to study the problems of city government more, and to take an active part in it.

There is one other mechanism that may encourage a better civic spirit. Many of our officials would do better if they knew how, but they do not stay long enough in office to learn, and they have no one to show them. No one can doubt that if our city treasurers were to

have their books frequently examined by a state inspector who would make suggestions for improvement, it would tend toward stimulating them in carefulness. Further than that, if an annual report were made showing the comparative standing of all the different cities of the state as regards the way in which they collected and expended their revenues, managed their water supply, their lighting, their street car system, etc., we should have a helpful spirit of emulation aroused between the different cities. No other country in the world lets its cities go on without some central supervising force. I quite agree that our legislatures have too much to do with our cities. Our cities should be free in action, but they should be compelled to work under inspection.

A better civic spirit is certainly needed. A proportional system of election for boards of aldermen, and a state supervisory board for cities, would both do much toward cultivating such a spirit.

Professor Bemis: The term "business administration" whose introduction into our city governments we are here considering, is too often associated in the minds of the people with those harsh tendencies of keenly competitive business which lead to long hours and sweat shop labor. We should make it very plain that we mean simply an honest and efficient administration conducted on broad and liberal lines for the higher welfare of the whole community.

Better machinery of city government, such as Professor Jenks and others have suggested, is indeed essential to reform, but we have now reached the point where

it is easier to draft a proper city charter than to convince the moving forces of society of the desirability of reform or to arouse a social conscience that shall lead to the sacrifices necessary for its adoption and administration.

In considering civic reform we may in a rough way divide society into four classes. The first is that portion of the very wealthy whose large profits from city franchises and evasions of taxation would be endangered, and rightly, by an honest and efficient government; second, the well-to-do merchant and manufacturer; third the small business man and home owner, and last the wage-earners. It is hardly necessary to classify separately the professional classes as most of those take the same attitude toward civic reforms as do the first or second class.

Now the first class is to day all powerful. City councils and assessors are readily "persuaded" to do the bidding of these practical rulers of ours. Of this class Mayor Swift of Chicago recently spoke when he said to the Commercial Club of his city: "Talk about anarchy; talk about breathing the spirit of communism. What does it more than the representative citizens of Chicago? * * * Who bribes the Common Council? It is not men in the common walks of life. They are men in your own walks of life, sitting by your firesides, at your clubs."

The demoralization in this class may not be as serious in most other cities, but it is everywhere alarming. Although it is claimed that corruption is necessitated by

the raids of blackmailing aldermen, yet those who thus defend themselves rarely give of wealth and great ability to secure better city charters and better officials so as to diminish the temptations of which complaint is made.

The remedy of city ownership of these enormously profitable monopolies of light and street railways is feared by many because of the possibilities of a corrupt civil service. But against the spoilsman who usually enjoys little social standing or respect, reform seems destined to find easier travelling than against the demoralizing influence of some so-called "best citizens" whose financial interests are so greatly promoted by the present order of things. All this should not prevent our laboring to introduce honest and thorough regulation of these city monopolies while still in private hands. The second class, the well-to-do manufacturers and merchants, fear that a reform administration would lead to larger taxes upon them than now, partly because the small house owner to-day pays an undue proportion, and partly because a good government not only means one that is more honest and to that extent more economical, but also one that will spend more on needed improvements in streets, education, etc., than do our present inefficient governments. Yet this class has much to gain from the increased respect for wealth that will be developed when it is not associated with special privileges. The obstacles to any strong effort for a business administration on the part of a third class, the small business man and the owner of a modest home, is a narrow partisanship and an absorption in

bread winning, but this class would gain largely by juster taxes, a wiser use of the money raised, better management of city monopolies, etc.

Then we come to the wage-earners, poor and often prejudiced, though often also having a surprisingly broad view of many social problems. This class will hardly take the lead in many great reforms unless they have a special class bearing, but can be induced to follow good leadership if it is furnished them. The great trouble in reaching this class has been the kid glove character of much of our reform work. That, fortunately, is passing away and the forces of reform are being massed all along the line. This is not a class struggle; rather is there need of a new social conscience in all ranks of society. It is not so much any radical industrial reorganization that is immediately needed, as a revolution in all our ethical conceptions of public righteousness and of our duty to advance the same at whatever personal sacrifice. The public conscience must be aroused to take possession of ward club and primary, as well as polling place, to the end that the true friends of the people may take the place of the alderman who holds that since posterity has done nothing for him he needs to do nothing for posterity. Nor must work stop with the election. Every day thereafter a watchful though friendly public opinion must support the efforts of the courageous public officer in his efforts to realize in some measure, in every place, the vision of the White City that we saw in 1893.

THE THEORY OF ECONOMIC PROGRESS

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THE THEORY OF ECONOMIC PROGRESS.¹

BY PROFESSOR JOHN B. CLARK.

Opinions concerning the future are usually colored by optimism. Whatever humanity needs we think it will ultimately have. This confidence is strengthened by the fact of progress, and in particular, by a mechanical progress that is unmistakable and rapid. Machinery, as it seems, must soon lighten labor and enrich the workers' lives.

This forward movement of society and the hopeful attitude that goes with it, are necessary to make life in the present worth living. A static condition, though it were full of comforts, would be intolerable. The picture of a stationary state presented by John Stuart Mill as the goal of competitive industry is the one thing needed to complete the impression of dismalness made by the political economy of the early period. A state could not be so good that the lack of progress would not blight it; nor could it be so bad that the fact of progress would not redeem it. A static paradise would be intolerable; but a dynamic purgatory would have at least one supreme charm, and would be the better state of the two.

The decisive test of an economic system is the rate and direction of its movement. How will our own sys-

¹ Opening address of the President of the American Economic Association, at its eighth annual meeting, in Indianapolis, Dec. 27, 1895.

tem bear that test? Has it the power always to progress? It is now what it is,—neither as good nor as bad as it might be; but if it is sure always to improve, what it is now is of secondary consequence.

Theory should give an *a priori* answer to the question. Certain forces are now acting, and at present they ensure improvement. The progress begins with the formation of a society. Association is a dynamic fact. A man must consume a variety of things if his income is to do him much good. In any one form, a large income would glut the particular want to which it ministers. Give the man only food till he is satiated, or give him clothing till he is over-burdened, and the final unit of his income is worth *nil*. Diversify his consumption and you relieve the difficulty. Large amounts of wealth will not now pall on him.

An isolated man could not secure the needed variety of goods. By becoming a Jack-of-all-trades he might make for himself a few different things. If he carried the process far he would lose, as a producer, more than he would gain as a consumer. Effective production demands specialization. A man should produce only one thing or a part of a thing. Isolated life would be static. The law of consumption, demanding diversification, and the law of production, demanding specialization would work against each other and bring economic progress to a halt. It is a deadlock created by the primary economic forces.

Exchanges remove the deadlock. They enable the primary forces of economic life to work together instead

of against each other. By producing for a market and getting goods from a market a man gets the benefits that come from varied consumption, and also those that come from specialized production. He may produce only one thing and yet secure many. This compounding of gains hurries the social man forward in a race of improvement. More and more minute in kind becomes his own production. He may put one small touch on one commodity, and yet lay the world under tribute to furnish articles for the satisfaction of his countless wants.

By virtue of his economic nature, as well as for other reasons, man is a social being. To gratify the two cardinal tendencies of his economic nature he accepts the restrictions of society. There is no doubt that, on the economic side, social life restricts. Civil law is in a way restrictive; yet nothing in it so dominates the individual as does economic law. This latter force it is that puts the man into a shop, keeps him there for ten hours a day, and minutely dictates what he shall do. It is beginning to be understood that, while we do indeed live in freedom, we live, move and have our being as society collectively wills. We may work or not as we please; but if we do not work, society will not present to us the multiform gifts that our wants require. We may choose our occupation; but if we so choose as not to conform our products to the needs of the world, we shall get but little from the world. The collective will is practically dominant.

It is now understood that economic problems cannot

be solved by a merely individualistic study. With all the attention that we may give to man, the atom of the economic system, we must recognize the social organism in its entirety. It acts and it develops. It is a sentient and intelligent being. It satisfies its own wants by a minutely regulated industry. It is isolated, like a primitive cave dweller. Commerce is becoming world wide ; the circle of exchanges will soon include all men. If the collective being, society, finds within itself opposing forces, as did the isolated man, it cannot relieve the difficulty by exchanging products with any other society. Within its own forces must lie the perpetual springs of progress, or the movement will stop. Industrial man translated himself to a dynamic plan of industrial life by associating with other men. Society as a whole has no associates within reach. Wholly within itself must lie its power of progress.

Competition is rivalry in mutual service. It is all men striving to outdo each other in benefiting all men. It is emulation but not normally war. It is the social guarantor of progress. It compels the directors of industry forever to improve their methods. Specialization opens the way for the use of machinery. Mechanical genius, when solitary, is sterile. This is not merely because an isolated man would not think of machines ; it is because he would have no use for them. The machine is par excellence a specialist, and requires a market. It puts its one minute touch on an endless series of goods all of one kind. It must find a place in which to sell them. It must work for society. Associa-

tion made machinery possible, and machinery furnished a nexus that has made the social connection close and perpetual.

Machinery has an irrepressible growth. When once a machine is introduced, it has no power to keep its original form. It is compelled to grow into new and better shapes. Employers are forced to make their steel servants take on more and more efficient forms. Mechanical gains bewildering in their rapidity result from the abject dependence of a competing employer on the comparative excellence of his producing mechanism. This must be not merely good, but as good as is that of competitors.

The question to be decided is whether the mercantile effects of the use of machinery will ever stop the increase of its mechanical efficiency. Can the social nexus ever be too close? Will the binding together of humanity in one producing organism ever bring a deadlock in the forces of the organism that will make it static?

A feature of organized life is the fact that laborers do not sell their own products to the consuming public. They sell them to their employers and let them put them on the market. Workers normally get, in the form of wages, the price of that part of the product that is specifically due to their work. The act of a force of laborers, in virtually selling their products to one employer, constitutes the first and most complete of commercial pools. It has the effect of cutting off such competition as would exist if each man were an inde-

pendent producer, taking his product in kind and peddling it through the community. The competition between different employers survives. It regulates wages and prices and ensures progress. It causes industrial methods forever to improve.

The employer's position is strategic and gives him a command over the methods of industry. He decides what shall be produced, and how it shall be produced. His position is also critical, since his commercial life depends on his efficiency as a coördinating agent. He can keep his place only by being as efficient as his competitors; and that means that his methods must become continually better. He cannot survive by merely directing his industry as well as he did when he assumed his control of it; he must direct it better and better. The condition of being an employer at all is that of using methods that in efficiency are on a plane with those used by others. One must march abreast of the general rank in order to survive; and he must sometimes step in advance of the rank, if he is to make a profit. The rank will then overtake him in his advanced position; and the result of the whole movement will be a universal forward step. New machines, new materials, new motive powers are used, at first locally. One employer introduces them and thrives by the means. Then all competitors get them, and in the end the public has the benefit resulting from cheapened goods. In the front rank of employers, mere survival; in advance of the front rank, gain; by the advance of all to the position of the foremost, social progress:—such is the sequence.

Competing employers develop a rivalry in compulsory beneficence. It is an effort born of self interest to outdo one's fellows in effective altruism. *Take that character out of the entrepreneur's action and progress will stop.* The peril that the rivalry entails for employers secures society against the stopping of the movement. The employer must never leave the critical position that forces him to beneficent activity. Security for employers would mean paralysis for society.

Economic monopoly would mean such safety for the employing class; and it would check the race for improvement. We noted the fact that the combining of artisans under one employer creates the first commercial pool, and cuts off competition among men who would otherwise be venders of wares to the community. Combinations among employers continue the process. Pools and trusts of the modern sort look like monopolies. Are they so? Do they make employers secure against the effects of competition? Do they stop progress?

On an earlier occasion I presented to this Association reasons for thinking that an effective competition continues after the formation of such unions. We found, as a practical fact, that too high prices exacted by a trust attract new competitors. The mere prospect of such competition is usually efficient in keeping the demands of a trust within limits. It is a protection for the public against exorbitant prices; and, in another way, it is a protection for workmen against unduly depressed wages.

What we now have to test is the extreme theoretical

power of the trust to check progress. It is to be conceded that the competition that survives the formation of a trust limits its power to make exactions from the public, but does not entirely destroy it. Up to the limit at which the latent power of competition is likely to become active, prices may be raised above a normal level. If new competitors are subjected to any especial dangers and difficulties, they may require a large prospective profit to lure them into the field. There are remainders of monopoly gain accruing to trusts.

It is then of the first importance to note, first, that the amount of gain, realized by such combinations is a secondary question. The vital problem is the effect of the unions on industrial progress. If they give an impetus to the dynamic movement of society, they are to be welcomed, though they secure enormous profits. If they retard or stop the movement, the state should strain every nerve to suppress them, even though they exact no profit at all. The hope of the world lies in the forward movement. The gains that the whole public get from it must soon obliterate the injury received by paying to a federation of producers even a large profit that is fixed in amount. The exaction of the trust works arithmetically; it takes from the public a mathematical sum. The forward movement works geometrically; it multiplies every day the fruitfulness of industry; and this continues forever. We can stand any fixed exaction if we gain thereby an unending increase in productive power.

Now if the extreme possibilities of the new regime

be tested, it will be seen that profits and the dynamic movement go together. The ultimate guaranty that the movement shall never stop lies in the fact that the gains of trusts must become capital if they are to do them much good ; and to be capital, these accumulations must enter the field as producing agents.

By a stretch of imagination let us behold the world given completely over to the dominion of trusts. There is one in every industry. It is iron-clad in its mastery of its own members, and can curtail its output of goods at will. It does so and gets rapidly rich. There is a universal regime of monopoly profits. What becomes of these accumulations ? They produce something ; and this means that each trust is a check on the others. If combination number one is unwilling to enlarge its own output of goods, it must enter the territory of trust number two ; and *vice versa*.

Remaining still in this imaginary world of universal combination, we can see that this cross competition,—the using of the accumulations of one trust to produce goods of the kind formerly controlled by another,—must, if it acts at all, act very efficiently. The trust that begins to compete with another has a strong commercial position. It can find a market for its goods. It cannot be crushed, as could a small competing company, by a cut-throat type of competition. The principle of fixed and variable charges, which has been studied in connection with railroads, has a certain application to manufacturing and commercial dealing. If the larger shop expenses and costs of management are borne, for

example, by the gains from making sewing machines, bicycles can be made and sold more cheaply than they could be if the large initial costs had to be defrayed from the gain of this department only. If the larger costs of a mercantile shop are met from the profits on dry goods, stationery may be sold more cheaply than it could be if rent and the costs of management had to be defrayed by the sale of paper and envelopes. This principle gives us department stores; and in an extreme but possible case it might give us a departmental system of manufacturing.

There is no risk in the assertion that the growth of capital in the world keeps the essential power of competition active. It is a practical fact that managers of trusts recognize. New capital keeps progress alive by its perpetual intrusion into the industrial field. For its security it must take on the most efficient forms. If new machinery is built to compete with a powerful trust it must be of the latest and best type. The whole power of the company that is back of the new venture must be expended in utilizing the best devices that are known, and in discovering others. In the extreme case that we imagined, in which the only competitor that could contend against one trust was another kindred combination, the power and shrewdness of the second would be used in excelling its rival in method, just as, in the primitive system, would be done by an individual competitor.

As the gains of one trust, taking the form of capital, may not only enter the territory of a rival combination,

and keep down the prices there exacted, but may force its rival into a race of improvement, and so keep the dynamic movement of society active, it follows that the only combination that can stop progress is one that should include, with one trust, the other trusts that are its possible rivals. *These latter trusts include or employ the men who are the customers of the former, on whom its exactions are to be practiced.* Such a combination is impossible. I venture to formulate these propositions as expressing the facts about producers' combinations in which humanity is chiefly interested:

1st. Latent competition holds the exactions of a trust in check.

2d. It is not necessary and not desirable that this influence should annihilate the gains that come through combination.

3d. Accumulations of capital afford the ultimate guaranty of industrial progress.

4th. The fact of progress renders any exaction from the public which is fixed in amount a matter of secondary consequence.

On the supposition then that this life-saving social force, competition, may have its vicissitudes and its changes of form, but that it is by nature inextinguishable, I desire to call attention to some features of the dynamic life that is thus guaranteed.

Inventions will not stop. In that direction we may give rein to the imagination without departing from fact. We may keep the one expectation that has never been weakened, that of an increasing command over the

forces of nature. We have seen visions and dreamed dreams in these latter days, and have foretold the time when machines shall be automatic, and when labor, as Mr. Tesla has said, shall be reduced to the touching of electrical buttons. Deft slaves, tireless workers whose nerves are of copper wire and whose muscles are steel, will make for us forms of utility and beauty in a profusion that will outdo an oriental tale. Will an incident of this gain be any new burden on labor? Will workers, as it were, be crushed in the vast engine of social production; or will the coming changes work democratically, bestowing their chief benefits where needs are the greatest? Will there be a general lightening of labor and enriching of life from the evolution that is before us?

The inventions of the past have brought local hardship on laborers. They have brought a general benefit that in the end far outweighs the evil. Indeed, in its entirety, the gain coming to labor from this source is not far from the total gain that labor now gets at all. Destroy the accumulated results of inventions and discoveries that, in the past, have caused temporary hardship, and you will carry the general rate of wages far below the starvation level. We are where humanity depends for its life on industrial improvements that, in their day, were secured for it by some vicarious suffering.

An efficient new machine often involves some displacement of laborers. A sudden change of process causes them no longer to be wanted at the point where the change occurs, though at a hundred other points

they are more wanted than they formerly were. The burden of finding and occupying some of these places falls on them; and for a time the burden may not be a light one. A dynamic society keeps a certain number of men in transit from one employment to another; and to the men themselves this fact may even take the concrete shape of positive want entailed on themselves and their families. With the massing of the forces of labor, which is a feature of present industry, it is becoming possible to oppose a certain resistance to this movement. Is there a motive for such resistance?

The more serious difficulty in the case formerly consisted, not in the mere necessity for leaving one place and finding another; it lay in the fact that, when the new positions were found, much acquired skill went for nothing. When the power loom begins to do the weaver's work, the man, as transferred to another craft, must take the lowest place.

The striking fact about mechanical improvement is that it takes much of this burden off from labor and puts it upon capital. The man who works with a machine of a high order performs one simple operation. It is quickly learned. If the man leaves that minute fraction of a handicraft he can soon master another. A fine subdivision of labor makes the fraction of a manufacturing operation performed by any one man a minute one; but machinery that accompanies this differentiating process has another effect. It tends normally to broaden the man. His real trade may become that of mastering, not one machine, but machinery. If he

knows in advance that he may have to leave one place in the shop and take another, he may seek at the outset that high grade of manual skill which makes him a true mechanic. There may be intellect blended with his manual acquisitions. He may early seek and get the type of manual training that will make him adaptable.

In the present state of the mechanical arts a man's security requires that he have a more generalized capacity than a craftsman of former times ever could have. While at any one time he may do one minute thing, he may have the power, with small loss in the transition, to do any one of a score of others.

I am not claiming that laborers have fully reached this condition of adaptability, in the few years during which mechanical changes have been so rapid. There has not been time to get the intellectual qualifications for it. What is clear is that, by the mere change in processes themselves, labor is already far more capable of moving from place to place than it formerly was. With no change in the man himself, the movement is inherently less difficult. If the *man* now improves the opportunities of the situation,—if he gets the broad training that the times demand,—he may end by occupying a far higher position than any old time craftsman could aspire to. He may dominate his craft, and not be dominated by it. He is already not bound but free. He is a potential master of many processes. He may make his command of them more complete. He may take, as it were, his master's degree, and instead of being dependent on one art, he may have many at his service.

He can never be tied to a single process, the vanishing of which will leave him helpless.

This is the natural and typical effect of modern development on the position of the laborer. The new century ought to see him free from the more serious vicissitudes that progress during this century has entailed.

What is the effect on capital? It is of a directly opposite kind. When the steam engine and the spinning jenny were introduced the step entailed on capital very little waste, while on labor it entailed very much. Now that machinery is in general use, a further invention is liable to cost labor little and capital much. It means the discarding of costly appliances. A machine that is out of date is material for the junk shop, however large an investment it may represent. Progress has crystalized into a material mechanism the element that suffers by transition. The complicated machine is a hopeless specialist wholly unadaptable. If it is displaced from its present position it is good for nothing.

The effect of development, then, has been to draw a line between two parts of what formerly made up a mechanic. Here is the man at work; and the tool in his hand is virtually a part of him. In this composite worker, man and tool, there is an element that ties him, like a serf, to his place of labor; while there is an intellectual element that, of itself, would make him free. A separation of these elements has come. The tool has grown in the man's hand. It has taken on complexities and become an intricate appliance; and, as this change

has gone on, out of the man into the machine has gone the element that binds,—the capacity to do one thing and that only. Within the man has grown the higher element that releases,—ingenuity and adaptability. The machine is now a slave indeed; it is tied to its place; but for the man, the change means emancipation.

Capital might rebel, if it could, against taking on itself the wastes of progress. We have seen that such rebellion would be useless. The opposite policy, effectual and certain to be adopted, is to make the improvements, take the loss, and get a profit that more than makes it good. The locating of wastes where they can be borne is a triumph of industrial evolution. Bold strategy makes capital safe. It makes industry productive, and does so without putting the incidental burdens of it mainly on displaced labor.

The result hinges on the irrepressible nature of competition, and that again, on the necessary action of those masses of capital that, in the new regime, are thrusting themselves into the field. So long as they come in abundance into the field, the competition that results is also abundant and effectual. We shall not find ourselves trying to make a salvage from the wreck of a formerly dynamic system. We shall not resort to legal forces, whose action is uncertain, in order to stay the ruin resulting from economic forces whose action is sure. It is economic force that guarantees progress; and unless it be thwarted, it ensures it in ample measure. It is honest capital,—productive wealth that is not filched from former owners, but is conjured out of non-existence,

—that, in the especial interest of labor, needs to be protected. Protect new capital, and let that act according to its nature, as a competing force. Then instead of holding with slippery fingers the vanishing remnants of competition, you will find this dynamic force acting with full energy, and even more than in any other interest, in the interest of labor.

It is an old and cant saying that the interests of labor and of capital are identical, if men were only wise enough to see it. In some relations they are not identical, and workmen see it more clearly than their critics. The adjusting of wages at the time of a strike is one illustration. The point of permanent identity of interest is in the increase of capital, and in its dynamic action. On that all interests are dependent.

This fact draws a new line of economic conflict for those who see it in its full significance. The battle of the future, as intelligently ordered, will be between honest wealth and dishonest wealth, with labor on the side of that which is honest. This means, indeed, that if a trust be acting in a predatory way, if it be crushing competitors unjustly or illegally, labor is the natural ally of the honest wealth that opposes the combination. It means also that workmen are natural allies of stockholders as against swindling directors. They are equally the allies of massed capital, wherever it may be, so long as it acts according to the spirit of the law and in the interest of progress. Everywhere the battle for the protection of labor is the battle for righteousness; and that wherever it is successful, protects honest wealth from that which is predatory.

Much honest wealth of the future may be massed in great holdings ; and the argument that makes the workman its ally would seem to ask that he enlist on the side of a plutocracy. This is reasonable if in any important way massed wealth is compelled to act democratically. If the worker can see that the more the new capital grows, the more it ministers to him, he can be comfortable among billions and billionaires. Labor will still demand every dollar of wages that it can get. It will press its employers by the power of labor unions. It will strike, till a better way of adjusting claims is available. Through its most belligerent actions it will see, when its eye shall be clear, the undetected harmony of interest between itself and honestly increasing capital. It will fight over distribution ; but it will protect capital as such. It will see in all legitimate accumulations, a power, first to make present wages high, and secondly, to make future progress sure.

THE RELATION OF CHANGES IN THE
VOLUME OF THE CURRENCY
TO PROSPERITY

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THE RELATION OF CHANGES IN THE VOLUME OF THE CURRENCY TO PROSPERITY.

BY PRESIDENT FRANCIS A. WALKER.

The view we shall take of The Relation of Changes in the Volume of the Currency to Prosperity, will necessarily depend greatly upon the view we take of the relation of the volume of the currency to prices. There is no reason why those who discredit the quantity-theory of money should admit that there is any necessary relation between the volume of the currency and public prosperity. It has, of late, been the fashion, in some quarters, to deny any validity to the once universally accepted doctrine that the value of money depends upon the relation between the supply of and the demand for it; while many, who do not repudiate the quantity-theory, yet refer to it in a slighting way, or as if its truth were a matter of grave question. Thus Mr. Wells, in his "Recent Economic Changes," after noting the fact that an increase in the currency of the United States more than proportional to the increase of population coincided with "a great and universal decline in the price of commodities, here as elsewhere," asks, "How do these experiences harmonize with the theory that the volume of circulating medium controls prices?" Mr. Wells does not, indeed, in terms assert that the volume of the circulating medium does not control prices; but

his language leaves it to be inferred that such is his view. And yet, Mr. Wells, during the period of greenback inflation, held that the advance of prices was due to the increase of the money-supply; and in his "Robinson Crusoe's Money," he worked out the effect of an increase of money-pieces in strict accordance with the traditional doctrine. Nay, it is a fact worthy of observation that those among us who are most given to denying or disparaging the quantity-theory of money, are the very men who, thirty years ago, were most active in their denunciations of the evil effects of an inflated currency in advancing prices. It would be easy to mention names enough to corroborate this statement; but it is not worth while to do so. Apparently these gentlemen think that while an increasing money-supply raises prices, a diminishing money-supply has no necessary relation to prices.

Let us look at the matter historically, though a very cursory treatment will suffice. When the silver discoveries of South America, in the 16th and 17th centuries, enormously increased the volume of the precious metals in existence, the rise of prices which followed was universally attributed to this as the competent and the sole cause. No man anywhere questioned the existence of this relation. When, during the American Revolution, the Continental Congress replaced the silver which had before circulated, to perhaps the value of eighteen million dollars, by paper exceeding three hundred million, in nominal value, all were agreed that it was excess of quantity which sent prices up, until a colonel's pay would scarcely find oats for his horse. Again, when, in

the French Revolution, the *assignats* were issued by tens of thousands of millions of francs, excess was the universally accepted cause for the fast declining value of the paper money. When, about 1850, the gold mines of California and Australia were almost simultaneously discovered, no one questioned that the great flood of new metal was the cause of the rise of prices which followed. Apparently, it is only when prices fall that it occurs to anybody to doubt the existence of a necessary relation between them and the money-supply. It seems hardly possible that, in all the instances thus hurriedly recited, philosophers, economists, statesmen, financiers and men of affairs could have been mistaken in regarding the increase in the volume of money as the cause of rising prices; and one might be well content to appeal simply to this general consent of mankind.*

But those who hold the quantity-theory of money are not bound to prove their case. That theory is simply the application, to the special case of money, of the general principle that value is determined in the relation between demand and supply. Prices being nothing, more or less, than the value of commodities expressed in terms of money, we advance no fundamental proposition when we say that prices are determined in the relation between the demand for, and the supply of, money. We merely point out a specific instance for the application of a principle which has been established by adequate

*“I accept the common doctrine that prices generally rise, other things being equal, in proportion to the volume of the metals which are used as money.”—Professor Alfred Marshall, testimony before the Herschell Commission. [No. 9629.]

induction, and the applicability of which is not challenged in any other instance. It rests, then, with the critics of the quantity-theory to show some reason, if they can, why a principle, admitted to be otherwise of universal application, should be suspected of failing at this point. This has never been done. However severe the strictures upon the quantity-theory, however much it has been caviled at, no one, to my knowledge, has seriously undertaken to show what governs prices, if the demand for and the supply of money, taken together, do not. All the favorite references of the day to clearing-house transactions and to the great system of credits are utterly without a bearing upon the validity of the quantity-theory of money. Such transactions and operations are properly to be cited as explaining the reduction of the field within which money operates. Statistics of this character are useful in accounting for the fact that the demand for money is not greater than it is. They show how far credit comes in, to allow exchange to be effected without the use of money. But, after all that banks and clearing-houses and book-accounts can do, goods are still exchanged for money. Are they not? Answer this. If they are, then the rates of those exchanges must be determined by some competent economic force. It cannot be by mere caprice or accident that a man gives a certain amount of his labor, or the products of his labor, for a certain number of money-pieces, and not for twice that number. It cannot be by mere caprice or accident that the possessor of money-pieces is compelled to give a certain number of them for

a given quantity of the other's labor or of the products of his labor; and is not able to obtain it with one-half that number of money-pieces. What is that force which compels the possessor of money or of goods, "the party of the first part" or "the party of the second part," to give as much as he does; which relieves him from the necessity of giving more than he does? In all other cases of value, that is, in regard to all exchanges of goods for goods, in regard to all exchanges of goods for services or of services for goods, under all conditions and in all places, the answer universally accepted is,—demand and supply. Some powerful reason must be shown for believing that any other principle governs prices, *i. e.*, the value of money.

Whatever incredulity has of late come to be felt regarding the quantity-theory of money is due, in part, to the complexity and elusiveness of the elements of the case. But the same difficulties of definition and determination might just as rationally lead one to deny that the phenomena of the weather are manifestations of force under law. For the rest, the cause for the incredulity referred to is found in the disregard of the condition which often is and always should be attached to the statement that an increase of the money-supply tends to raise prices, while the diminution of the money-supply tends to lower prices. That condition is, "other things equal." We have, for example, recently seen what appeared to be a statistical demonstration of the falsity of the quantity-theory, which entirely disregarded this condition, not only changes in the habits of the

people in respect to carrying and using money, but even a two-fold increase of population being treated as of no consequence. Generally speaking, however, writers upon this side of the question generally go so far as to reduce the volume of the currency to a per capita statement; but they are just as much given to ignoring other possible and even probable changes.

Not only may the habits of the people in this respect alter greatly, within a short time; but the very increase of the money-supply may become the cause of increased demands for money. When Mr. Jacob wrote his book on "The History of the Precious Metals," he reached the conclusion that, the increase of the money-supply, during the first generations after the discovery of America, to the extent of about five hundred per cent., resulted in a general rise of prices nearly as great. Subsequent investigations, however, have greatly reduced this estimate; and Professor Cliffe Leslie reaches the result of a general enhancement of prices somewhat exceeding two hundred per cent. Now, such a failure of complete correspondence between the ratio of increase in the money-supply and the ratio of increase in general prices, affords no ground for questioning that the relation of cause and effect exists between the two phenomena. "Other things" did not remain equal while the stock of the precious metals was undergoing this enormous enhancement. The vast and sudden increase of silver, from the mines of the new world, itself produced a marked increase in the demand for money. The habits not only of the commercial classes, but of the whole body of the

population naturally changed in respect to the holding and use of money. The world down to that time had been starved in its money-supply, ever since the downfall of the Roman Empire; and the new silver was eagerly absorbed by the famished system. Moreover, as Professor Cairnes, in his excellent essays on the Gold Question, has shown, the new silver and the rising prices set on foot a host of industrial and commercial enterprises and wonderfully stimulated the productive activity of the whole world. Society, both industrial and political, took on a new face. Speculation and adventure awoke in every land. Discoveries of new arts and of new resources in nature made a call upon the new money, which, with larger production, prevented prices from rising to anything like the degree in which the money-supply had increased. Effects of a similar character but far more extensive in their range, followed the gold discoveries of California and Australia. Prices rose, but to nothing like the extent to which the volume of the money-supply was increased. The rise of prices itself stimulated adventure and speculation; while the new gold furnished the necessary means. As Mr. William Newmarch says, "There is at all times a profusion of enterprises to be undertaken; of experiments to be tried; of schemes to be worked out; of improvements to be made; of ingenious men to be set up with capital; of trades already profitable to be made more so by vast extensions."

The limited amount of time at my command will not allow a full treatment of the quantity-theory of money.

All that is said against it, either in the way of argument or of cavil, does not in the slightest degree shake my confidence in the principle that, all other things equal, the universal law of exchange applies to money as to every other thing that is bought or sold. Assuming, then, the truth of this doctrine, I will, with your permission, go forward to state, in a very general way, what, in my judgment, is the effect of changes in the volume of the currency as respects public prosperity.

And first, of inflation. Here we have to deal with a moral element which is of immense and irresistible influence, economically. Purposed inflation, by act of government, having for its object the raising of prices and the scaling-down of debts, is subject to the gravest impeachment, on grounds, not only of social justice, but of economic expediency as well. It carries with it the sting of fraud and leaves behind it a retribution swift, sure, and terrible. The moralist is not more strongly bound than is the economist to denounce every measure having any such design or effect. The difference between an inflation of the money-supply due to the discovery of new mines and fields of the precious metals, and an inflation due to act of government having the design and purpose to scale-down debts is just as wide as the difference between the natural death of a miserly rich man, bringing his estate into the hands of a generous and public-spirited heir, at which result all good men may rightly rejoice, and the murder of the miser for the purpose of changing the ownership of his property, which no plea of public spirit or generosity in the use

of that property could make to be considered as any other than an atrocious and detestable act worthy only of condemnation and punishment.

Looking then, for simplicity of reasoning; at a metallic inflation, which, whatever hardship it may bring upon certain persons or classes of persons, carries no sting of injustice with it, let us inquire what are its effects upon public prosperity. The subject is one which is susceptible of great exaggeration. It is also one which may be treated in a small and grudging way, with results as distinctly false to life as any that could be due to extravagance of view and of statement. I believe that the truth lies between the extreme claims of some who have attributed more than a magical, an even miraculous, virtue to a natural increase of the money-supply, and the mean and parsimonious admissions of certain economists of the *à priori* order. But I also believe that the truth lies very much nearer the former than the latter line. The weighty statement of David Hume is the first which should be quoted in any discussion of this subject.

“It is certain that, since the discovery of the mines in America, industry has increased in all the nations of Europe, except in the possessors of those mines; and this may be justly ascribed, amongst other reasons, to the increase in gold and silver.

“Accordingly we find that, in every kingdom into which money begins to flow in greater abundance than formerly, everything takes a new face; labor and industry gain life; the merchant becomes more enterpris-

ing, the manufacturer more diligent and skillful, and even the farmer follows his plow with greater alacrity and attention. This is not easily to be accounted for, if we consider only the influence which a greater abundance of coin has in the kingdom itself, by heightening the price of commodities and obliging every one to pay a greater number of these little yellow or white pieces for everything he purchases. And as to foreign trade, it appears that great plenty of money is rather disadvantageous, by raising the price of every kind of labor.

“To account, then, for this phenomenon, we must consider that, though the high price of commodities be a necessary consequence of the increase of gold and silver, yet it follows not immediately upon that increase; but some time is required before the money circulates through the whole state and makes its effect to be felt on all ranks of people. At first no alteration is perceived; by degrees the price rises, first of one commodity and then another, till the whole at last reaches a just proportion with the new quantity of specie which is in the kingdom.

“In my opinion it is only in this interval, or intermediate situation, between the acquisition of money and rise of prices, that the increasing quantity of gold and silver is favorable to industry. When any quantity of money is imported into a nation, it is not at first dispersed into many hands, but is confined to the coffers of a few persons, who immediately seek to employ it to advantage.

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"It is easy to trace the money in its progress through the whole commonwealth, where we shall find that it must first quicken the diligence of every individual before it increases the price of labor."¹

I think that in the foregoing remarks Mr. Hume even understates the advantages of a metallic inflation. In addition to all which he alleges, there is the important consideration of the effect of such a cause upon the burden of existing indebtedness, both public and private. The world is always in bonds to the generations that have preceded. The industry, the activity, the enterprise of the generation upon the stage are heavily weighted by obligations to the past. These obligations cannot be repudiated, they cannot be intentionally lightened by act of government, under impulse from the debtor class, without social and economic retributions that will produce a mischief far outweighing any benefits which may be in view in such ill-advised measures. But when this effect is brought about by natural means, if not too sudden and violent in operation, I believe it to be wholly beneficial and harmonious, economically. That the great silver discoveries of the 16th and 17th centuries, diminishing the weight of feudal burdens, cutting down the effective revenues of existing dynasties, and reducing the weight of obligations derived from the past, had an influence, wholly in addition to that mentioned by Mr. Hume, in not only extending commercial activity, but lifting society and industry up to a new and higher plane, seems to be beyond question.

¹ Hume's "Essay on Money."

To show that I am not without the support of economic authority, I quote the language of M. Chevalier, the first of French economists, and of J. R. McCulloch, one of the most conservative of the English school. M. Chevalier says "Such a change will benefit those who live by current labor; it will injure those who live upon the fruits of past labor, whether their fathers' or their own. In this, it will work in the same direction with most of the developments which are brought about by that great law of civilization to which we give the noble name of progress."

Mr. McCulloch has perhaps taken even stronger ground in favor of the desirableness of a gradual reduction in the burden of debts, through a natural increase of the volume of the precious metals. He maintains that a depreciation of the circulating medium, through this cause, promotes industry, diminishing the weight of the obligations which press upon the producing classes, whether employers or employed, giving them the use, at a lower rate in produce (because at a fixed rate in money), of all the agents—land, buildings, stock—which they hold by hire or lease for terms of years, from those who are not themselves personally engaged in production. At the same time, all that part of the taxation of government which goes to the payment of the principal and interest of public indebtedness, is reduced in its weight upon the whole community, whether engaged in active production or not. Looking at the matter in this light, Mr. McCulloch declares that, "while, like a fall of rain, after a long course of dry weather, it may be pre-

judicial to certain classes, it is beneficial to an incomparably greater number, including all who are actively engaged in industrial pursuits, and is, speaking generally, of great public or national advantage.” With reference to this statement, Professor W. Stanley Jevons says : “I cannot but agree with McCulloch that, putting out of sight individual cases of hardship, if such exist, a fall in the value of gold must have, and I should say has had already, a most powerfully beneficial effect. It loosens a country, as nothing else could, from its old bands of debt and habit. It throws increased rewards before all who are making and acquiring wealth, sometimes at the expense of those who are enjoying acquired wealth. It excites the active and skilful classes of the community to new exertions.”—[Investigations into Currency and Finance, pp. 96–97.]

Even Professor John E. Cairnes who was much disposed to quarrel with the great increase of the precious metals, due to the Californian and Australian discoveries, as involving “a more cumbrous medium of exchange” and as investing an undue amount of the world’s labor and capital in the form of gold and silver, and who asks, “Are the other nations of the world to continue forever laboring in the service of the gold countries, for no other than the barren reward of an addition to their circulation?”, even this highly conservative writer declares, concerning the increase of the stock of silver due to the South American and Mexican discoveries, that “it supplied and rendered possible the remarkable extension of oriental trade which forms the most striking commercial

fact of the age that followed." And Professor Cairnes further indicates among the beneficent, though political rather than economic, results, the hastening decay of the feudal power, the increasing dependency of the sovereign upon his people for the supplies which his hereditary domains no longer furnished in sufficient amount, and the rising spirit of self assertion on the part of the commercial and mechanical classes.¹

When we turn from considering the effects upon public prosperity of a change in the currency in the direction of inflation, to inquire what is the social and industrial influence of a change which is in the nature of contraction, we find a remarkable alteration in the views of those who especially affect economic orthodoxy. One would suppose that, if the money-function is of such supreme importance as to make inflation a possible source of untold mischief, it could hardly fail to be admitted that contraction might also be a possible source of mischief. But it has not pleased the economists of this school to admit that sauce for goose is sauce for gander. The very writers who, during the inflation period in the United States, urged with the greatest earnestness the evils of a rapid increase of the money-supply, teaching that it disturbed the standard of value, altered the distribution of wealth, perverted the course of industry, promoted speculation, generated dishonesty, and in every conceivable way did mischief to the body politic and economic, tell us that the money-function is of so little consequence, commercially, industrially and

¹ Cairnes's "Essays toward a Solution of the Gold Question."

socially, that contraction is really of no account whatsoever. They argue that the production of wealth is really a matter only of labor power, capital power, and land power; and that such production may be trusted to go on, without let or hindrance from any such trivial accident as contraction of the currency. I will not hold all the economists of this school responsible for so extreme a statement as that which Mr. David Wells makes in his Currency plan of Resumption, "Were all the currency in the country absolutely swept out of existence to-morrow morning, there would doubtless be much inconvenience experienced, the same as though all the yard-sticks, foot-rules, and bushel-measures were to disappear; but, in either case, there would not probably be one less acre of land cultivated, yard of cloth made, ton of coal dug, or pound of iron smelted, in consequence." But I think it not unfair to say that, with somewhat less of extravagance, they are in general disposed to look upon the possible evils of a diminishing money supply as of small consequence. For myself, I have never been able to understand how men could possibly consider the money-function of so much importance and, at the same time, of so little importance, as to regard the evils of inflation as almost illimitable, economically, socially and politically, while regarding the possible evils of contraction as not worth talking about. Leaving, however, all question as to the consistency of the orthodox writers, let us inquire whether a diminishing money-supply could set in motion forces prejudicial to public prosperity, and if so, in what ways it might be expected that injurious results would occur.

In the first place, a contraction of the currency, either absolute or relative, that is, either a positive diminution of the money-supply, or a failure of the money-supply to keep up with the demands of commerce due to enlarged productiveness of labor and capital and to the multiplication of the uses of money in any community, has the necessary and immediate effect to enhance the burden of all debts and fixed charges. Money having been taken as the standard for determining the rights of the creditor and the obligations of the debtor, in all cases of deferred payment, a diminution of the money-supply, or a failure of the money-supply to keep up with the demands of commerce, must enhance the weight of the burdens imposed upon the present by the past. That burden is, at the best, necessarily, under the conditions of human society, a very weighty one. Every man of affairs knows how "the interest-charge" bears down upon productive enterprise, even the most successful. Wherever the conditions of business cause enterprise to drag in the least—in agriculture, except where natural resources are richest; in commerce, except with the ablest management; in manufactures, except under conditions which create a practical monopoly or at least give some marked advantage over competitors, the weight of the interest-charge becomes galling and oppressive. Few men can till the soil in a long-settled country, if they have to borrow all their capital; few men can carry on trade and manufacture, except under rare conditions, if they have to borrow all their capital. I appeal to every man of business for the truth of this

statement. The margin of buoyancy in the human frame is so small that it takes but very little around a man's neck, while struggling in the water, to carry him to the bottom. The margin of profit in ordinary business is so small that any enhancement of obligations derived from the past, must be seriously felt; while, if that enhancement persists through a considerable period, the drain upon productive enterprise thus created cannot fail to tell heavily upon the vitality of the commercial and industrial system. This must be so, from the purely actuarial point of view; but it is fairly to be questioned, whether the moral influence of such a cause, in inducing discouragement and lack of confidence, does not operate with even greater force.

But the chief of the evil effects produced by a diminishing money-supply is, in my humble opinion, to be seen in the impairment of enterprise on the part of the producer and the exchanger of wealth, due to falling prices. It must be remembered that, under the modern system of commerce and industry, the sole motive for the production of wealth is found in the anticipated profits of business. A manufacturer buys two hundred thousand dollars worth of material and pays three hundred thousand dollars in wages because he hopes, with good fortune, to realize perhaps twenty or twenty-five thousand dollars in profits. Unless he sees his way fairly open to realize something in the way of profits, after all his outlay and his risk, his interest in production ceases, except so far as he may, for a short time, carry on business for the sake of holding his laboring

force, or his circle of customers together. Yet a very small reduction in the price of the large body of goods produced may entirely wipe out the utmost profit he could reasonably promise himself; may even turn the anticipated profit into a loss. In such a case, even a slight movement in the direction of prices falling between the time when materials are purchased and manufacture undertaken, and the time when goods are to be marketed and paid for, may, if persisted in, become a very serious matter. There will always be, in all branches of business, those whose financial strength and power of organization and management enable them to overcome adverse conditions and to conquer fortune; but in every branch of business there is a lower third, on whom competition always presses with great severity, to whom it is a continual struggle to make both ends meet. These men are at a disadvantage in buying, in making, and in selling. Their bad debts are numerous; they have to pay heavily for discounts; they have perhaps not the means or the credit required to obtain the most modern machinery and the best appliances. To men in such a situation, steadily falling prices are embarrassing, harrassing and oppressive: a weight around their necks which tends continually to wear them out and threatens sooner or later to send them to the bottom. Their margin is so small, at the best, that a very slight hostile force may produce the most seriously injurious results to them; while the embarrassments and failures of this lower third of the producing class constitute a continual menace to the abler

men of business in their respective branches of manufacture, demoralizing the market for goods and unsettling the market for loans with continual alarms.

But there is still a further potency for mischief to be found in declining prices. All that has been said would be true were there not in modern business a strongly marked tendency to occasional commercial crises and to "hard times" in productive industry. It seems inseparable from the existing organization of affairs that periods of highly stimulated production should alternate with periods of depression and restricted production. Under this universal and seemingly inevitable condition of commerce and industry, I cannot but believe that the general downward tendency of prices tends to make disturbances more frequent, to increase their severity and, especially, to protract their duration. With a moderate, progressive increase of the money-supply and a general upward tendency of prices, it can hardly fail to result that the man of business, whether manufacturer or merchant, will be readier to assume the initiative, will be more courageous and hopeful, will display greater enterprise and energy. We all know that it is entirely possible that production shall be locked in "a vicious circle," producers closely limiting their operations because consumption is checked; consumption remaining all the while at a minimum for no other reason than that the operative class, producing little, have little with which to purchase goods. We have, in our own life-time, seen such a situation persisting through a long period, because men of business would not believe in the possi-

bility of recovery, and each waited for the other. Wherever, perhaps by causes purely accidental in the original instance, industry and trade fall into this condition, it does not seem to be a matter of doubt that the restoration of confidence and enterprise must be tardier and more difficult when the general movement of prices is downwards than when it is upwards. I have just now said that it is a little thing around a man's neck which will overcome his margin of buoyancy, slight at the best, and drag him to the bottom. It is equally true that it is a very little thing under a man's arms which will so enhance his margin of buoyancy as to keep him afloat for hours. For the foregoing reasons I believe Mr. Balfour was fully justified in saying that a slow appreciation of the standard of value "is probably the most deadening and benumbing influence which can touch the springs of enterprise in a nation."

But one more remark requires to be made, and that is with respect to the argument, so commonly employed in these days, by which it is attempted to be shown that the volume of actual money is of little consequence, by reason of the operation of the credit-system, which makes good any deficiencies that may exist in the body of the currency. On this point allow me to read the following paragraph from the address of Mr. L. L. Price, of Oxford, as President of the Section of Economic Science and Statistics, at the Ipswich meeting of the British Association for the Advancements of Science, of the present year. Mr. Price remarks: "It is sometimes asserted that the influence of credit on prices is so con-

siderable as to reduce to unimportance a decrease in the "available supplies of gold. It may at once be admitted that *the modern extensive development of credit obscures the relation between the metal and prices; but it does not destroy it*; and according to the view we have been trying to emphasize, the mission of economics is to remove this veil of obscurity. In this instance it may show that the relation is not unreal because it is indirect; that credit, expanding and contracting of itself, owing to increasing or diminishing speculative activity, is yet limited and controlled in its movements by the changing dimensions in the basis of cash on which it rests; and that, through the bank reserves meeting or restricting the demands for petty cash and permitting an expansion or causing a curtailment of credit, the supplies of the standard metal exert an important influence on prices."

I am convinced that what Mr. Price here says is strictly true. While the utmost expansion of the credit system may, in a measure, disguise the influence of a diminishing money-supply, it cannot, at the best, wholly offset that influence; while it is fairly a question whether the operations of credit are not less active, rather than more active, when contraction of the currency is going on, than when the currency is undergoing a moderately progressive increase.

THE ADJUSTMENT OF WAGES TO
EFFICIENCY

NOTE.

THE three papers here reprinted were read before the American Society of Mechanical Engineers, at the meetings of 1889, 1891, and 1895. Though printed in the Proceedings of that Society for the years mentioned, they are not easily accessible to economic students. The accounts which they give of the various methods by which it has been attempted to adjust wages to efficiency, and to devise methods of payment which shall secure the advantages of piece-work and of profit-sharing, are of interest and of importance, and the Publication Committee of the Economic Association believes that a service will be done to members of the Association and to the public by adding them to the *Studies*. They are republished with the kind permission of the authors and of the Society of Mechanical Engineers.

GAIN-SHARING.

BY HENRY R. TOWNE.

Webster defines *profit* as *the excess of value over cost*, and *gain* as meaning *that which is obtained as an advantage*. I have availed of this well-expressed though delicate distinction between the two terms, to coin a name for the system herein described, whereby to differentiate it from profit-sharing as ordinarily understood and practiced.

Profit-sharing, as the term is now commonly used, implies a voluntary agreement, on the part of the principal in business, to set aside some portion of the profits of his business for division among all or certain of his employees, as a stimulus to their zeal and industry. Thus understood, profit-sharing involves the participation of the employee in all the complex factors that affect the final result, or profit, of a business, including necessarily its *losses*, since these tend to impair, or may even extinguish, the profit. He thus becomes practically a partner, except that his participation in losses is limited to the surrender of his share in anticipated profits, and does not involve any impairment of his personal capital.

It follows, therefore, in most cases of profit-sharing, that the interest of each participator in the profit fund is largely affected by the actions of others whom he cannot control or influence, and that what he may earn

or save for the common good may be lost by the mismanagement or extravagance of others. For example, let us suppose the case of a trader who buys and sells a certain staple, such as cotton, and who, having two clerks, entrusts to one of them the purchasing of the staple, and to the other the business of selling it to the customers of the house. Obviously here the amount of profit will depend partly upon the ability of the buyer to purchase material of the proper quality at the lowest market rate, and partly upon the ability of the seller to dispose of it promptly at the highest obtainable prices. If each does his share well, a large profit may result; while if either fails in his part there may be no profit, and even a loss, no matter how well the other may have performed his part. But it does not follow that the work of either or both will determine the question of profit, for unexpected changes in the market may neutralize the best plans and cause loss, or may result in large profit in spite of unskilful management.

Let us now suppose the case of a manufacturer who, in addition to buying the raw material, converts it into a finished product before selling it, and who voluntarily concedes to the operatives of the manufacturing department of his business, as well as to his chief assistants, a participation in its profits. The factors affecting the profit fund now become more complex, and may be divided into several distinct groups, as follows:

1. Those contributed or controlled by the owner or principal,—such as capital, plant, character of buildings, machinery and organization; and, to a greater or less

degree, the skill, experience, industry, and ability of the owner so far as he personally manages the business.

2. Those influenced by the mercantile staff,—the buyer and the selling agent in the case supposed.

3. Those determined by causes beyond the control of the principal and his agents; such as fluctuations in cost of raw material or in the market value of the finished product, the rate of interest, losses by bad debts, etc.

4. Those influenced by the workmen or operatives; such as care of property, economy in the use of material and supplies, and, chiefly, efficiency in the use of machinery and employment of labor.

Now it is obvious that while the operatives may influence the items in the fourth or last group to an extent which may be large, or even controlling, in determining the question of profit or loss, they have little control—and in most cases none whatever—over the items specified in the other three groups; and that to admit them to participation in the net results of the whole business, while commendable as an act of generosity, is not defensible either as an equitable adjustment of the complex and often conflicting interests involved, nor as a theoretically correct solution of an economic problem.

The right solution of this problem will manifestly consist in allotting to each member of the organization an interest in that portion of the profit fund which is or may be affected by his individual efforts or skill, and in protecting this interest against diminution resulting from

the errors, of others, or from extraneous causes not under his control. Such a solution, while not simple, is attainable under many circumstances, and attainable by methods which experience has shown to be both practical and successful.

This resolution of the profit fund into component parts obviates many of the crudities in, and objections to, profit-sharing in its common form, but still leaves untouched another feature which is wrong in theory and often objectionable in practice, namely, the surrender by the principal of any portion of his legitimate profits without the assurance of an equivalent return from those on whom he bestows it. This, as said above, may be commendable as an act of charity, but as a solution of the problem in question it is neither complete nor accurate. Moreover, mere charity to those who do not need it is a doubtful good, and among intelligent and self-respecting men is not always relished. Certainly the problem we are considering will be best solved if it can be so formulated that the element of gratuity or charity, of giving without tangible consideration, can be eliminated, and that, as presented to the employee, it becomes an invitation from the principal that they should enter into an industrial partnership, wherein each will retain, unimpaired, his existing equitable rights, but will share with the other the benefits, if any are realized, of certain new contributions made by each to the common interest. For example, to recur to our former case, let us suppose that the wages of the operatives are already fairly adjusted according to the prevailing scale, so that for the

employer to offer them a portion of his profits without a guaranty of return would be equivalent to his giving them more than the fair market value of their services; while if, under this inducement, they gave him better or more work than before, they would not receive fair recompense in case, by reason of causes beyond their control, his business yielded no profit. But let us suppose, further, that the principal, wishing to enlist the self-interest of his employees to augment the profits of the business, should offer to the operatives a proposition somewhat as follows :

“ I have already ascertained the cost of our product in labor, supplies, economy of material, and such other items as you can influence. I will undertake to organize and pay for a system whereby the cost of product in these same items will be periodically ascertained, and will agree to divide among you a certain portion (retaining myself the remainder) of any gain or reduction of cost, which you may affect by reason of increased efficiency of labor, or increased economy in the use of material, or both ; this arrangement not to disturb your rates of wages, which are to continue, as at present, those generally paid for similar services. ”

Can there be any question as to the inherent fairness and accuracy of this solution of our problem, or any doubt as to its cheerful acceptance by intelligent labor? As to the latter point an emphatic answer has already been given by actual experience ; as to the former a reply will be attempted in what follows.

The system for which I have adopted the designation

of "Gain-sharing" aims to recognize and provide for the conditions typified by the foregoing suppositious case, and to afford a basis for allotting to the employees in a business a share in the gain or benefit accruing from their own efforts, without involving in the account the general profits or losses of the business. The system is now in actual use as affecting some 300 employees, has been in operation more than two years and is demonstrated to be practical and beneficial. It has been applied to nearly one-half the divisions of a large and unusually varied industry, and will ultimately be extended to nearly all. As soon as understood by the employees, it is liked, and those not working under it in the instance referred to are desirous that it should be extended to include them. Its most obvious application is to productive industries, especially those whose product is of a simple or uniform kind; but it may be adapted to many others, and also to the business of large mercantile houses. It is equally applicable to cases where labor is employed either by the piece, by the day, or by contract, and in no way impairs the existing freedom of the relation between employer and employee, but tends to confer substantial benefit on both sides.

The basis or starting-point of the system is an accurate knowledge of the present cost of product (or, in the case of mercantile business, the cost of operating it), stated in terms which include the desired factors, that is, those which can be influenced or controlled by the employees who are to participate in the result, and which exclude all other factors. In some cases the previous

method of accounting or book-keeping may have been such as to supply this information, in which case the gain-sharing system can be easily and promptly organized. In others the existing books may contain the record from which the desired information can be digested and compiled. When no such record exists, however, the only safe method consists in devising and putting into action a system of accounts which will furnish the desired *data*, and in awaiting the accumulation thereby of information which, being based upon the operations of a reasonably long period—usually from six to twelve months—will constitute a fair mean of average.

The factors which should be included in, and those which should be excluded from, the account will vary with circumstances, each particular case having to be considered by itself. As a general rule it may be stated that, in the case of an account affecting the operatives in a producing or manufacturing business, the following items should be *included*, viz. : labor at cost, raw material, measured by quantity only (for which purpose an arbitrary fixed price may be assumed); incidental supplies, such as oil, waste, tools, and implements at cost; cost of power, light, and water, where means exist for correctly measuring them (for which purpose it often pays to provide local meters); cost of renewals and repairs of plant; and, finally, the cost of superintendence, clerk hire, etc., incident to the department covered by the system. In like manner the following items should be *excluded*, viz. : market values of raw material (which are liable to fluctuation); general expenses, whether re-

lating to management of works or to commercial administration, and, in general, all items over which the operatives can exercise no control or economy. Finally, the credit side of the account should be determined by the amount or volume of product measured by a scale of values fixed in advance, and based upon facts previously ascertained. For example, if, in a given case, it has been determined by the experience of several years that the present cost of product, measured by such items as are covered by the inclusive list above stated, is, say, one dollar (\$1) per unit of product, then the gain-sharing proposition might be formulated as follows : the principal would say to the employees in substance, "I will organize the system, will assume the cost of book-keeping and other expenses incident to it, and will provide all the facilities reasonably required to assist you in reducing the cost of product ; I will credit the account with the output at the cost price heretofore obtaining, namely \$1 per unit, and will charge it with the items in the inclusive list ; if at the end of the year the credits exceed the charges, I will divide the resulting *gain*, or reduction in cost, with you, retaining myself one portion—say one-half—and distributing the other portion among you *pro rata* on the basis of the wages earned by each during the year." Suppose, then, that at the end of the year it was found that the cost per unit of product had been reduced from \$1 to 95 cents, that the total gain thus resulting was \$800, and that the aggregate wages paid during the year had been \$10,000. One-half of the gain would be \$400, which would equal 4 per cent. on

the wages fund, so that each operative would be entitled to a dividend of 4 per cent. on his earnings during the year. This is equivalent to two weeks' extra wages, no mean addition to any income, and amounting, even in the case of a laborer earning \$1.50 per day, to a cash dividend of \$18 at the end of the year.

In the practical application of the system several important details have to be determined, for which no general rule can be laid down. Of these the most important is the question of the division of the gain or profit between employer and employees. In each of the twenty-one gain-sharing contracts which I have thus far instituted, it has seemed proper to make this division an equal one,—one-half to the principal and one-half to the operatives,—and the results thus far have justified the rule and proved generally satisfactory to both parties to the contract. Obviously, however, different circumstances may justify or require a different basis of division.

Another important question is the share of the profit fund or *gain* apportioned to the foreman, overseer, or contractor having immediate control of the operatives interested under the system. Where such person is employed under salary he may share *pro rata* with the operatives, but as this would tend to diminish his share with any increase of responsibility due to the need of an increased number of subordinates, I prefer to allot to him a definite part of the profit fund. Assuming fifty to be the average number of employees under one foreman, I regard ten to fifteen per cent. of the profit fund as about the proper allotment to the foreman, leaving

forty to thirty-five per cent. for his subordinates, where fifty per cent is retained by the employer.

As the foreman has more power and control than any subordinate, it is proper that his interest should be larger, and it is expedient, also, in adjusting his total compensation, to make a considerable fraction of it contingent upon the results of his work. Where the "contract system" of work prevails, I have adopted the rule of paying the contractor, like his helpers, by the hour; his "basis rate," or rate per hour, being determined by adding together the three following factors, viz: (1) his value as a workman, usually that of his best helpers; (2) one half cent per hour for each completed year of service as contractor, in recognition of increased value due to experience; and (3) a figure representing a very small but definite percentage on the aggregate amount of his contract earnings, in recognition of the fact that his responsibility varies somewhat with the volume of work under his control. The first of these items is usually constant; the second causes a slight annual increase in the "basis rate;" while the third tends to increase the rate when the volume of business is large, and to reduce it when business falls off. The percentage of the profit fund or "gain" allotted to a contractor may be larger, proportionately, than to a salaried foreman, depending upon his duties, his liability for quality of product, and the amount of his "basis rate" or hourly wages. As in the former case, however, it is desirable that a considerable fraction of his total compensation should be derived from the profit fund, and thus be contingent upon the results of his work.

A third point to be considered is the basis of participation on which the dividend to the operatives shall be apportioned among them. The simplest plan, and the one which I have adopted in practice, is to distribute the total profit fund allotted to the operatives on the basis of the actual wages earned by each during the year, including in the account everyone employed during that time, even if for one day only. If a dividend is earned it is not payable until the year is closed, when it is paid in cash, in the same manner as the regular wages, but enclosed in a special "dividend envelope," on which is stated the total annual wages of the recipient, and the rate and amount of his dividend. The rules should provide for the disposition of unclaimed dividends, which may very properly go into the treasury of a mutual benefit fund, if such an organization exists, and should also be carefully framed with reference to local laws, in order to avoid unforeseen liabilities and complications.

It has been found feasible, and very beneficial, to have posted in each room or department where the gain-sharing system is in force, a suitable blank, preferably under glass, on which can be entered each month the net results of the system during the preceding month, and including a statement of the *rate* of dividend earned since the beginning of the contract year. The stimulus thus given to the interest of the employees is very marked.

Another point of much importance is the question of the length of time during which a contract for "gain-sharing" shall continue without modification. Its in-

ception is voluntary with the employer, and he may impose on the contract any conditions he sees fit, since its whole purport is to tender to the employee an interest in excess of his stipulated wages, from which it is expected that he will gain an increase of his compensation but under which he cannot possibly suffer loss. Such a contract, however, when once definitely entered into is, like other contracts, only amenable to revision by the joint consent of both parties to it. It is important, therefore, that its provisions be carefully considered in advance.

The length of time which it is desirable to adopt for a gain-sharing contract depends greatly upon the conditions of the case. As already explained, the starting-point of the system is a knowledge of the previous *cost of product*, the "gain" or increased economy in this constituting the fund out of which the increased compensation to labor is to be paid. When, therefore, the cost of product is already accurately known, a gain-sharing contract may safely be made for a considerable length of time, whereas, when the cost is not well known, it is better to fix its terms for a shorter period, in order that they may be revised when the necessary information has been obtained. The best results will be obtained, however, when the contract is definitely fixed for a reasonably long period, say from three to five years, or even longer. A necessary element in the case is the adoption of a "contract price" for each article to be produced, by which, as previously explained the credit side of the account may be determined. At the begin-

ning of a contract the employer obviously has the right to adopt whatever "contract prices" he pleases, since their purpose is merely to serve as a basis from which to compute the "gain" in which he voluntarily tenders participation to the employees, and since the contract does not diminish the obligation of the employer to pay each employee his stipulated wages. Presumably the employer will adopt reasonably low contract prices, that is, closely approximating to previous cost; because to do otherwise would be prejudicial to his own interests, although to fix them on too low a scale would defeat the object of the system by leaving no opportunity for "gain," and hence no stimulus to increased efficiency of the employee. In like manner, at the expiration of a contract, the option and right reverts to the employer of revising the "contract prices" before offering a renewal of the contract; in which event, if during the previous term the cost of product has been considerably reduced, he will presumably (although this is not always the wisest course) proportionately reduce the contract prices. If, therefore, the contract period be short, the employee will naturally ask himself whether it is to his interest, for the sake of a small increase of compensation during that period, to make increased exertion in view of the fact that, at the end of the period, the employer will probably again reduce prices to a point where, in order to increase his earnings, the employee would have to exert himself even more than at first. If, however, the contract price be definitely fixed for a long period, the employee can afford, for the sake of

present gain, to disregard this question as one only affecting a somewhat remote future, and to use his best efforts and intelligence to effect a reduction in the cost of product. As a result of this the employer will be able, when the opportunity for a revision of prices arises, to make a larger reduction than he would probably attain in the same time under the plan of frequent revisions, and can also then afford to act more liberally toward the employees in the matter. In my judgment, therefore, both parties will usually be benefitted by having a long contract period in all cases where the previous cost of product is well known, and where no radical change of product or methods is likely to occur.

The simplest application of the gain-sharing system is to cases where work has already been done by contract,—that is, where one person employed for the purpose, is paid for the finished product *by the piece*, the wages of his helpers being charged against his account; and it can be readily organized in any case where the nature of the product is such as to adapt it to being thus done “by contract.” In this connection it is proper to note that the contract method, whether under the gain-sharing system or not, is entirely compatible with “piece-work,” that is, an arrangement whereby each operative is paid for his individual product by the piece instead of by day’s wages. In this case the amount of piece-work earnings is charged against the contract account in the same manner as the wages of persons employed by the day or hour, and is treated in the same manner as other earnings in computing the dividend of each operative

under a gain-sharing contract. In corroboration of this statement I may mention that I have already adopted gain-sharing in several cases where the work was previously and is still done under the "contract" system, and in which, also, the piece-work system has since been largely applied. We thus have the three systems of gain-sharing, contract work, and piece-work, all co-existing harmoniously, and all contributing to a common result.

Again, in the case of a foundry, the gain-sharing system can be easily and advantageously applied. Here economy of material as well as efficiency of labor is largely under control of the operatives, and should be made a factor in the account. This can be accomplished by basing the "cost of product" upon the ascertained results of a previous period, labor and miscellaneous items of small supplies being charged up at actual cost, and fuel and metal being charged according to an arbitrary scale of fixed prices, which may conveniently be determined by adopting the average market rate during the previous year, or at its close. The arbitrary values for material which are thus adopted are then incorporated in the gain-sharing contract, and remain unchanged during its period. The "contract prices" for finished product are deduced from the actual results of the preliminary period, the cost of material being calculated by extending the actual quantities at the arbitrary prices per pound or other unit which may have been adopted for the proposed contract, the employer using his discretion as to how close the contract prices should be to

previous actual costs. Where the foundry product is of varied character, a separate price is fixed for each class of castings, and a record kept of the output of each.

Gain-sharing may thus be adapted to industries of almost any kind in which it is feasible, by reasonable expenditure, to differentiate those elements of cost which can be influenced by the persons who are to participate in the resulting gain from those which are beyond such influence or control. Careful and intelligent consideration must be given to properly adapting the system to the varied circumstances and details of each case; and the experience of several renewals of a gain-sharing contract, each accompanied by the modifications and improvements which are the outcome of experience, may be needed to attain the highest results. In my own experience I have failed, in a few cases, properly to adjust the conditions, and hence have seen the first year close with an apparent loss instead of a gain. In such cases a careful analysis of the operations of the year will usually explain the cause of disappointment and indicate the remedy. The first year of a contract for gain-sharing is apt to be disappointing to its promoter, owing to lack of interest, faith, and comprehension on the part of the employees. These all vanish, however, under the convincing argument of a *cash dividend*, and after the first of these has been paid there is usually a marked increase of interest in the plan.

Appended hereto are several papers illustrative of the working of the system in actual practice. The first of these—Appendix A—gives the results obtained in

the case of a number of the contracts to which I have applied the gain-sharing system, two of these covering a period of two years each. All of the others are now running on the second year, but only the results of the first year are here stated. The "contract prices" adopted for these gain-sharing accounts were in some cases the actual previous costs, but in a majority of cases the contract prices were fixed at rates which were a reduction of from ten to twenty per cent., and in one case of thirty per cent., from previous costs. These reductions were made advisedly, and only in cases where there was good reason to believe that increased effort would result in very considerable reductions of costs. In most cases the results have justified the reductions, and even on the basis of the new prices the contracts have yielded fair profits or dividends.

Appendix B is a transcript of one of the monthly exhibits mentioned above as being posted in the room or shop where the system is in force. These figures were inserted in the blank, month by month during the year, and gave information to the employees of the results of their work as affecting their interests under the gain-sharing contract. In this case the proportion of gain allotted to helpers was twenty-five per cent., and the net result of the operations for the year yielded a dividend to them of 5.7 per cent. on their wages or earnings during the year.

Appendix C shows the rules governing the application of the gain-sharing system to the iron foundry in the works of the Yale & Towne Manufacturing Com-

pany, at Stamford, Connecticut. Where the system is applied to a shop or department in which contract work obtains, the rules require modification in certain details, but are substantially the same in principle as those given herewith. In all cases the rules will require careful adaptation to the details of the particular work to which they relate, and to the methods of shop management and organization which are in use.

APPENDIX A.

CONTRACT No.	TERM.	HELPERS' EARNINGS.	GAIN OR LOSS.	HELPERS' SHARE.	RATE OF DIVID'ND. PER CT.
1	5 years.	\$13,080 43	\$3,388 53	\$850 18	.065
2	5 "	9,216 87	*37 59
3	5 "	3,666 34	840 05	208 98	.057
4	3 "	4,936 54	573 58	148 09	.03
5	5 "	910 22	*48 52
7	3 "	3,861 28	537 72	134 43	.035
8	3 "	1,012 92	447 59	111 42	.11
9	3 "	419 55	109 04	27 27	.065
10	5 "	17,696 47	1,256 37	318 53	.018
15	5 "	728 53	358 20	89 62	.123

SECOND YEAR.

1		\$14,096 05	\$3,251 04	\$817 56	.058
3		3,732 21	1,027 20	261 15	.07

* Losses.

APPENDIX B.

THE YALE & TOWNE MANUFACTURING CO.

Monthly Accounts Relating to Contract No. 3—1887.

MONTHS.	TOTAL PROFIT FOR MONTH.	PROFITS FROM BEGINNING OF YEAR.			MONTHLY MONTHLY CHARGES CHARGES FOR FOR TOOLS. SUPPLIES.	
		Total Amount.	25 per ct. belong'g to helpers	Percent- age on Wages.		
January	*\$45 52				\$55 84	\$3 95
February	85 72	\$40 20	\$10 05	.017	46 85	2 97
March	115 53	155 73	38 93	.039	78 13	7 62
April	98 48	254 21	63 55	.046	35 57	5 98
May	*51 46	202 75	50 69	.0307	37 16	1 75
June	182 90	385 65	96 41	.0505	26 66	2 04
July	9 12	394 77	98 69	.046	17 25	2 74
August	76 12	470 89	117 72	.049	27 10	2 02
September . . .	8 64	479 53	119 88	.044	44 20	3 14
October	114 76	594 29	148 57	.0499	56 96	6 27
November . . .	*94 72	499 57	124 89	.0378	58 30	75
December . . .	340 48	840 05	210 01	.057	27 30	4 56
Totals for year,	840 05	840 05	210 00	.057	511 32	43 79

* Losses.

APPENDIX C.

THE YALE & TOWNE MFG. COMPANY, STAMFORD,
CONN. RULES FOR "GAIN-SHARING" SYSTEM IN
IRON FOUNDRY, DECEMBER, 1887.

I.—CONTRACT PERIOD.

The present contract between the company and the employees of the Foundry will cover a period from December 1st, 1887, to December 1st, 1888, and will be subject to revision after the latter date.

2.—THE SYSTEM.

The "gain-sharing system" has been in operation during 1887 throughout the greater part of Dept. A, where some 200 men are now at work under it. Its essential principle is this: that out of each \$100 of savings or "gain" in the cost of product, in labor and supplies, the Company retains only \$50, the other \$50 being divided among the employees in the Department. To accomplish this the Company agrees to organize the method of operation, to keep the necessary accounts, and in general to facilitate matters so far as it reasonably can; the employees, on the other hand, agree to use their best efforts to increase the efficiency of their work, to economize in the use of supplies and material, and in general to do their share toward reducing the cost of finished products.

3.—CONTRACT PRICES.

To establish a basis by which to measure the saving or gain effected, the following plan has been adopted. The average prices for metal and fuel which prevailed during the past six months have been carefully ascertained, and these prices have been adopted for the contract period; applying these prices to the product of the Foundry for the past six months, all other items of labor and supplies being extended at their actual amounts, the cost per pound of castings of each class during the past six months has been ascertained; the prices thus ascertained are adopted as the *basis prices* for the contract period.

4.—CONTRACT PROFIT OR GAIN.

At the close of each month of the contract period the cost of castings produced during the month will be ascertained by charging up the metal and fuel at the *fixed prices* adopted as above, and charging all other items, including wages and supplies, at actual cost. If the cost of castings thus ascertained is less than the *basis cost* determined as above, the difference between the two will be the saving or gain for the month. The result of each month's operations will be posted in the Foundry for the information of the employees.

5.—DIVISION OF PROFITS.

Within thirty days after the close of the contract year the total amount of saving or gain will be divided as follows :

Fifty per cent. will be retained by the Company.

Ten per cent. will be allotted to the Foreman of the Foundry.

Forty per cent. will be distributed among the employees of the Foundry in the proportion of the actual wages earned by each during the contract year.

6.—WAGES RATES.

The wages of each employee will be fixed, as heretofore, by the Foreman of the Foundry, who will continue to have full discretion in the employment and discharge of the help required, and in the direction of their work.

7.—PAYMENT OF PROFITS.

Each employee will be entitled to his pro rata share of the profits, whether he has worked during the whole year or only a portion thereof. Any share of profits belonging to those who may honorably leave the Company's service during the year will be forwarded to them, provided they shall have given proper information as to their address. Any profits due to employees, and not claimed within three months after the close of any yearly contract period, will thereby become forfeited: all sums thus forfeited will be paid over by the Company to the Yale & Towne Mutual Benefit Society.

8.—PIECE WORK.

Wherever feasible the system of piece work will be employed, the piece rates being fixed by the Foreman subject to approval by the Company. All employees, whether working by the day or by the piece, will be entitled to their proportionate share of the annual profits on the basis of the actual wages earned by each.

9.—FOUNDRY SUPPLIES.

The Foundry account will be charged with all supplies furnished by the Company. The items so charged will include metals, fuel, sand, sieves, files, shovels, oil, waste, brooms, repairs, and, in general, everything consumed in the Foundry.

The supplies on hand at the beginning of the contract period will be charged to the Foundry account, and those on hand at the end of the year will be credited to the same account.

10.—GUARANTY.

The Company guarantees the payment to the employees of the Foundry of the regular wages earned by each, on day work or piece work, irrespective of whether this contract shows a profit or not.

11.—CONDITIONS.

The effect of the system being to give every workman employed under this contract a participation in the profits resulting from it, it is hereby stipulated as a condition of the employment of each and every person engaged under this system, that, in consideration of the interest assigned him in the profits of the contract, all claim thereto shall be forfeited by him in the event of his discharge by reason of misconduct or incompetency, or in the event of his combining with others in any way to disturb or affect the relations between the Company and its employees. This provision in no way curtails the right of each employee to negotiate with the Company, through the Foreman, in regard to his own rate of wages, nor does it in any way impair the title of each employee to his proportionate share of the profits in the event of his honorably leaving the Company's service, whether at its desire or his own.

12.—SHOP RULES.

All employees will continue to be governed by the Shop Rules of the Company, which are hereby referred to and made a part of this contract and agreement.

THE PREMIUM PLAN OF PAYING FOR LABOR.

BY F. A. HALSEY.

This plan has been devised in order to overcome the objections inherent in the other plans in general use. It accomplishes this purpose without introducing corresponding objections of its own. Its merits are best shown by contrasting it with the other plans in common use, and it will be discussed with them in the following order :

- I. The day's-work plan.
- II. The piece-work plan.
- III. The profit-sharing plan.
- IV. The premium plan.

I. THE DAY'S-WORK PLAN.

Under this method the workman is paid for and in proportion to the time spent upon his work. The objections to the plan are well known. Analyzed to their final cause, they spring from the fact that any increase of effort by the workman redounds solely to the benefit of the employer, the workman having no share in the consequent increase of production. He has consequently no inducement to exert himself and does not exert himself. Under this system, especially in a manufacturing business, matters naturally settle down to an easy-going pace, in which the workmen have little interest in their work, and the employer pays extravagantly for his product.

II. THE PIECE-WORK PLAN.

Under this plan the workman is paid for and in proportion to the amount of work done. It is a natural attempt to overcome the objections to the day's-work plan. It has the appearance of being just and of being based upon correct principles. Nevertheless, extended inquiry has convinced the writer that it seldom works smoothly, and never produces the results which it should.

An employer who has become dissatisfied with the results of the day's-work plan, and decides to adopt piece-work, usually reasons that work which is costing in wages, say one dollar per piece, could, with some extra effort be produced on the existing scale of wages for about eighty cents; and desiring to give the workman some inducement offers him ninety cents per piece, thereby dividing the expected saving with him. The trouble begins at once. The workman does not believe that he can "make wages" at the rate offered, and objects. He is, however, finally induced or compelled to try it, and immediately proceeds to astonish himself and all others by increasing his output far beyond the expected 25%. His earnings increase with startling rapidity, *but the cost of work remains where set, at ninety cents per piece*, and the employer soon finds that instead of a substantially equal division of the savings he is getting but little, and the workman practically all of it. He accordingly proceeds to cut the piece price, and the fatal defect of the system appears. This cut is in appearance and in fact an announcement to the workman that his earnings will not be allowed to exceed a

certain amount, and that should he push them above that amount he will be met with another cut. Cutting the piece price is simply killing the goose that lays the golden egg. Nevertheless, the goose must be killed. Without it the employer will continue to pay extravagantly for his work; with it he will stifle the rising ambition of his men. The difficulties of the day's-work and piece-work plans are thus seen to be the exact antitheses of one another. Analyzed to their final cause, the difficulties with the piece-work plan spring from the fact that the piece price once set, any increase of effort by the workman redounds to *his own* benefit alone—the employer having no share in the consequent saving of time. To obtain a share he cuts the piece price, with the consequences stated. Under this system matters gradually settle down as before to an easy-going pace in which the workmen approach the limit of wages as nearly as they consider prudent. Their earnings are somewhat more and the cost of the work is somewhat less than under the day's-work plan, but there is no more spirit of progress than under the older method. The employer is constantly on the lookout for a chance to cut the piece prices, that being his only method of reducing cost; and the men are constantly on the lookout to defeat the employer's well understood plan, knowing, as they do, that any one who is so unwise or so unfortunate as to do an increased amount of work will be in effect punished for it by having his piece price cut and himself thereby compelled to work harder in the future for the old amount of income. The sys-

tem makes the interest of the employer and employee antagonistic, and hence of concerted effort toward a progressive reduction of cost there is none. This I believe to be the usual and natural history of the piece-work plan. I know it to represent the situation in some of the foremost machine shops of the country. An additional objection to the plan grows out of the fact that it requires a knowledge and record of the cost of each piece of a complicated machine, and oftentimes of each operation on each piece. This limits its range of application to products which are produced in considerable quantities.

III. THE PROFIT-SHARING PLAN.

This plan was originally devised in the effort to avoid the objections to the two former plans. Under it, in addition to regular wages, the employees are offered a certain percentage of the final profits of the business. It thus divides the savings due to increased production between employer and employee, and at first sight appears to meet the difficulties of the plans thus far discussed; but, nevertheless, on analysis, will be found to be as defective as they, both in principle and application. The leading objections to the plan are the following:

First. The workmen are given a share in what they do not earn. Increased profits may arise from more systematic shop management, decreased expenses of the sales department, or many other causes with which the workmen have nothing to do. Anything given them

from such sources becomes simply a gift, the result of which is wholly pernicious—in fact the entire system savors of patronage and paternalism.

Second. The workmen share, regardless of individual deserts. An active, energetic workman cannot have the same incentive to increased exertion under a system which divides the results of his efforts among a dozen lazy fellows at his side that he would have under one in which his earnings depend on himself alone; on the other hand, a lazy workman would naturally consider it much easier to take his portion of the earnings of his fellows than to exert himself and then divide the results with all the others of the force.

Third. The promised rewards are remote. The incentive cannot be as great under a system which computes and divides the savings once or twice a year as under one which pays out the extra earnings week by week.

Fourth. The plan makes no provision for bad years. We hear much of profit sharing, but nothing of loss sharing. And yet the workman cannot expect to share the profits while others assume the losses; and *per contra*, those who assume the risk of loss cannot be expected to share the profits with those who have nothing at stake.

Fifth. The workmen have no means of knowing if the agreement is carried out. With their exaggerated ideas of the profits of business, the results must be in many cases disappointingly small, and they will doubt the honesty of the division. What is to be done in such a

case? Invite the workmen to appoint a committee to examine the books, and report? Most employers will demur at this, and yet without it the employees can have no assurance of good faith; and were it done, what good could result? How many workmen's committees are there who are sufficiently versed in modern accounts to form any idea of the proceeds of the year's business from an examination of the books? In this light the profit-sharing plan is seen to be an agreement between two parties, the first of whom has every temptation and opportunity to cheat the second, while the second has no means of knowing if he has been cheated, and no redress in any case. In the present state of human nature this cannot be expected to be satisfactory to the second party. The fact that the plan has worked with apparent success in some instances and for considerable periods of time proves nothing. The most disastrous boiler explosions and bridge failures have been preceded by long periods of apparent safety. Even the Conemaugh dam held water for many years. It is a truism that the most rickety and unsafe devices often serve their purpose for long periods. At the beginning the workmen look on the amount received at the annual division as a bonus, and anything is better than nothing; but later on they will look on it as theirs by right of having earned it, and the above situation is certain to arise. The fact is, that the profit-sharing plan is wrong in principle, and cannot be in any large sense a solution of the wages problem.

IV. THE PREMIUM PLAN.

Taking up now the subject proper of this paper, it aims at a division of the savings due to increased production between the employer and employee, but by a direct method instead of the circuitous one of the profit-sharing plan. The plan assumes two slightly different forms, according to the nature of the work; one form being suited to work produced in such quantities as to be reducible to a strictly manufacturing basis, and the other form to the more limited production of average practice. In both forms the essential principle is the same, as follows: The time required to do a given piece of work is determined from previous experience, and the workman, in addition to his usual daily wages, is offered a premium for every hour by which he reduces that time on future work, the amount of the premium being less than his rate of wages. Making the hourly premium less than the hourly wages is the foundation stone on which rest all the merits of the system, since by it if an hour is saved on a given product the cost of the work is less and the earnings of the workman are greater than if the hour is not saved, the workman being in effect paid for saving time. Assume a case in detail: Under the old plan a piece of work requires ten hours for its production, and the wages paid is thirty cents per hour. Under the new plan a premium of ten cents is offered the workman for each hour which he saves over the ten previously required. If the time be reduced successively to five hours the results will be as follows:

1	2	3	4	5
Time consumed.	Wages per piece.	Premium.	Total cost of work = col. 2 + col. 3.	Workman's earnings per hour = col. 4 ÷ col. 1.
Hours.	\$	\$	\$	\$
10	3.00	0	3.00	.30
9	2.70	.10	2.80	.311
8	2.40	.20	2.60	.325
7	2.10	.30	2.40	.343
6	1.80	.40	2.20	.366
5	1.50	.50	2.00	.40

This table illustrates the manner in which the cost of the work diminishes and the workman's earnings increase together until, to cite the extreme case of the last line, if the output be doubled, the wages paid per piece will be reduced $33\frac{1}{3}\%$, but the workman's earnings per hour will be increased $33\frac{1}{3}\%$. Were the premium less than ten cents per hour, the reduction in cost for each hour saved would be greater, and the workman's earnings less. On the other hand, the workman would have a smaller incentive, and the time would not be reduced so much. The output would be less, and the net result might be worse for both employer and employee. This raises the inevitable question: What should be the rate of the premium? Nothing but good sense and judgment can decide in any case. In certain classes of work an increase of production is accompanied with a proportionate increase of muscular exertion, and if the work is already laborious a liberal premium will be required to produce results. In other classes of work increased pro-

duction requires only increased attention to speeds and feeds with an increase of manual dexterity and an avoidance of lost time. In such cases a more moderate premium will suffice. Any attempt, however, on the part of the employer to be greedy and squeeze the lemon too dry will defeat its own object, since if a trifling premium be offered, the workman will not consider it worth while to exert himself for so small a reward, and the expected increase of output will not take place. On the other hand, if the premium offered be too high, the employer will simply pay more than necessary for his work, though less than he has been paying. If the rate of premium is decided upon judiciously, it may and should be made permanent. No cutting down of the rate should ever be made unless, indeed, improved processes destroy the significance of the first time base. Every increase of earnings is necessarily accompanied by a corresponding decrease of cost, and if the premium be such as to give these a satisfactory relation, the workman may be assured that there will be no limit set to his earnings; that the greater they are the more satisfactory they will be to the employer. The importance of this cannot be too strongly insisted upon. If the premiums be cut the workmen will rightly understand it to mean, as under the piece-work plan, that their earnings are not to be permitted to pass a certain limit, and that too much exertion is unsafe. The very purpose of the plan is to avoid this by so dividing the savings between employer and employee as to remove the necessity for cutting the rate, and hence enable the workman's earnings to be

limited only by his own ability and activity. The baneful feature of the piece-work plan is thus completely obviated, and instead of periodical cuts with their resulting ill-feeling, the premiums lead the workman to greater and greater effort, resulting in a constant increase of output, decrease of cost, and increase of earnings.

The broad-minded employer will not fail to recognize that his own gain from the system comes largely from the increased production from a given plant, since not only does the system reduce the wages cost of the piece of work in hand, but in so doing it increases the capacity of the plant for other work to follow. The advantages from this source are so great as to render unnecessary any refined hair-splitting as to the rate of the premium.

Such is the premium plan, and the writer confidently predicts that the more it is studied the more perfect will appear its adaptation to the requirements of industrial enterprise and human nature. Surely, a system which increases output, decreases cost, and increases workman's earnings simultaneously, without friction, and by the silent force of its appeal to every man's desire for a larger income, is worthy of attention. In addition to the commanding features noted it has others of lesser note. The transition to it from the day's-work plan is easy and natural. It does not involve a reorganization of the system of book-keeping, but only an addition, and a small one, to the existing system. No opposition to it, organized or otherwise, is possible, since there is

nothing compulsory about it, and nothing tangible to oppose. It is simply an offer to gratify one of the strongest passions of human nature, and the difficulty often found in introducing piece-work cannot occur with this.

In carrying out the plan in connection with work which has been reduced to a manufacturing basis, the writer finds the form of time ticket shown on the following page convenient.

This ticket is issued by the foreman, the blanks at the top being filled up by him. If desired as a check he punches a hole on the line, indicating the hour when the work is given out, repeating the same when the work and ticket are returned. The record of the time is kept by drawing a line between various hour marks, an operation which the most illiterate can perform.¹ The ticket provides for several days' work, and is not returned until the work is completed, when it contains the record of the entire job.² On the back of the ticket is printed the following:

"According to previous experience this work should require . . . hours. If completed in less time than that a premium of . . . cents will be paid for each hour saved."

¹ Attention was called to this form of time ticket by Professor Hutton in Vol. IX. of the *Transactions of the American Society of Mechanical Engineers*, page 386.

² This rule holds, even when the job after being partly finished is interrupted by something more pressing. In such a case the ticket is taken up by the foreman in order to insure that the entries have been made for the completed work. He issues the ticket again when the work is resumed, and when all is completed this ticket goes to the office, where a single entry in the cost book records what, under the usual method, might require a half dozen or even more entries.

TIME TICKET.

Name of Part

No. of Pieces

Operation.

Workman

SHO

[illegible]

Machine set by

Time hours.

When the ticket is returned, a comparison of the back with the front shows the premium earned. This is entered opposite the workman's name, in a book kept for the purpose, which is a companion to the usual time book or pay roll. On pay day the accrued premiums are paid to each workman along with the regular wages. The cost book is written up from the ticket in the usual way, except that as the ticket usually contains the record of several days' work, the labor of keeping the cost book is much abridged.

On work which, while produced as a regular product, is still not produced in sufficient quantity to justify recording the cost of each part, the premium offer is made to the group of men who carry out the work. The proposition is made as a posted notice, or otherwise in the following form :

"According to previous experience this work should require . . . hours. If completed in less time than that a premium of . . . cents per hour saved will be divided among those working on the machine, division to be in proportion to time spent on the work."

In this form the system loses the advantage of dealing directly with the individual, and the second objection to the profit-sharing plan is introduced, though in a modified degree, as a small group of men is dealt with instead of the entire force. The remaining objections to the profit-sharing plan are not introduced, and on such work the plan proposed is distinctly superior, though lacking theoretical perfection. The piece-work plan does not apply to work of this kind, and hence there can be no comparison between it and the plan under discussion.

On contract work undertaken for the first time the method is the same, except that the premium is based on the *estimated* time for the execution of the work.

The system is thus applicable to all classes of machine-shop work except "jobbing" or work done by the hour, and there is no very vociferous demand from the shops for a method of reducing the time on that class of work.

The writer believes that, judiciously administered, the plan proposed will produce a larger output and cheaper work, and at the same time pay higher wages than any other whatsoever.

A PIECE-RATE SYSTEM

BEING A STEP TOWARD PARTIAL SOLUTION OF THE LABOR PROBLEM.

BY FRED W. TAYLOR.

The ordinary piece-work system involves a permanent antagonism between employers and men, and a certainty of punishment for each workman who reaches a high rate of efficiency. The demoralizing effect of this system is most serious. Under it, even the best workmen are forced continually to act the part of hypocrites, to hold their own in the struggle against the encroachments of their employers.

The system introduced by the writer, however, is directly the opposite, both in theory and in its results. It makes each workman's interests the same as that of his employer, pays a premium for high efficiency, and soon convinces each man that it is for his permanent advantage to turn out each day the best quality and maximum quantity of work.

The writer has endeavored in the following pages to describe the system of management introduced by him in the works of the Midvale Steel Company, of Philadelphia, which has been employed by them during the past ten years with the most satisfactory results.

The system consists of three principal elements :

- (1) An elementary rate-fixing department.
- (2) The differential rate system of piece-work.
- (3) What he believes to be the best method of managing men who work by the day.

Elementary rate-fixing differs from other methods of making piece-work prices in that a careful study is made of the time required to do each of the many elementary operations into which the manufacturing of an establishment may be analyzed or divided. These elementary operations are then classified, recorded, and indexed, and when a piece-work price is wanted for work the job is first divided into its elementary operations, the time required to do each elementary operation is found from the records, and the total time for the job is summed up from these data. While this method seems complicated at the first glance, it is, in fact, far simpler and more effective than the old method of recording the time required to do whole jobs of work, and then, after looking over the records of similar jobs, guessing at the time required for any new piece of work.

The differential rate system of piece-work consists, briefly, in offering two different rates for the same job, a high price per piece in case the work is finished in the shortest possible time and in perfect condition, and a low price if it takes a longer time to do the job, or if there are any imperfections in the work. (The high rate should be such that the workman can earn more per day than is usually paid in similar establishments.) This is directly the opposite of the ordinary plan of piece-work in which the wages of the workmen are reduced when they increase their productivity.

The system by which the writer proposes managing the men who are on day-work consists in paying *men* and not *positions*. Each man's wages, as far as possible,

are fixed according to the skill and energy with which he performs his work, and not according to the position which he fills. Every endeavor is made to stimulate each man's personal ambition. This involves keeping systematic and careful records of the performance of each man, as to his punctuality, attendance, integrity, rapidity, skill, and accuracy, and a readjustment from time to time of the wages paid him, in accordance with this record.

The advantages of this system of management are :

First. That the manufactures are produced cheaper under it, while at the same time the workmen earn higher wages than are usually paid.

Second. Since the rate-fixing is done from accurate knowledge instead of more or less by guess-work, the motive for holding back on work, or "soldiering", and endeavoring to deceive the employers as to the time required to do work, is entirely removed, and with it the greatest cause for hard feelings and war between the management and the men.

Third. Since the basis from which piece-work as well as day rates are fixed is that of exact observation, instead of being founded upon accident or deception, as is too frequently the case under ordinary systems, the men are treated with greater uniformity and justice, and respond by doing more and better work.

Fourth. It is for the common interest of both the management and the men to coöperate in every way, so as to turn out each day the maximum quantity and best quality of work.

Fifth. The system is rapid, while other systems are slow, in attaining the maximum productivity of each machine and man; and when this maximum is once reached, it is automatically maintained by the differential rate.

Sixth. It automatically selects and attracts the best men for each class of work, and it develops many first-class men who would otherwise remain slow or inaccurate, while at the same time it discourages and sifts out men who are incurably lazy or inferior.

Finally. One of the chief advantages derived from the above effects of the system is, that it promotes a most friendly feeling between the men and their employers, and so renders labor unions and strikes unnecessary.

There has never been a strike under the differential rate system of piece-work, although it has been in operation for the past ten years in the steel business, which has been during this period more subject to strikes and labor troubles than almost any other industry. In describing the above system of management the writer has been obliged to refer to other piece-work methods, and to indicate briefly what he believes to be their shortcomings.

As but few will care to read the whole paper, the following index to its contents is given :

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1. Capital demands fully twice the return for money placed in manufacturing enterprises that it does for real estate or transportation ventures. And this probably represents the difference in the risk between these classes of investments.

2. Among the risks of a manufacturing business, by far the greatest is that of bad management; and of the three managing departments, the commercial, the financing, and the productive, the latter, in most cases, receives the least attention from those that have invested their money in the business, and contains the greatest elements of risk. This risk arises not so much from the evident mismanagement, which plainly discloses itself through occasional strikes and similar troubles, as from the daily more insidious and fatal failure on the part of the superintendents to secure anything even approaching the maximum work from their men and machines.

3. It is not unusual for the manager of a manufacturing business to go most minutely into every detail of the buying and selling and financing, and arrange

every element of these branches in the most systematic manner and according to principles that have been carefully planned to insure the business against almost any contingency which may arise, while the manufacturing is turned over to a superintendent or foreman, with little or no restrictions as to the principles and methods which he is to pursue, either in the management of his men or the care of the company's plant.

4. Such managers belong distinctly to the old school of manufacturers ; and among them are to be found, in spite of their lack of system, many of the best and most successful men of the country. They believe in men, not in methods, in the management of their shops ; and what they would call system in the office and sales departments, would be called red tape by them in the factory. Through their keen insight and knowledge of character they are able to select and train good superintendents, who in turn secure good workmen ; and frequently the business prospers under this system (or rather, lack of system) for a term of years.

5. The modern manufacturer, however, seeks not only to secure the best superintendents and workmen, but to surround each department of his manufacture with the most carefully woven net-work of system and method, which should render the business, for a considerable period at least, independent of the loss of any one man, and frequently of any combination of men.

6. It is the lack of this system and method which, in the judgment of the writer, constitutes the greatest risk in manufacturing ; placing, as it frequently does, the

success of the business at the hazard of the health or whims of a few employees.

7. Even after fully realizing the importance of adopting the best possible system and methods of management for securing a proper return from employees and as an insurance against strikes and the carelessness and laziness of men, there are difficulties in the problem of selecting methods of management which shall be adequate to the purpose, and yet be free from red tape, and inexpensive.

8. The literature on the subject is meagre, especially that which comes from men of practical experience and observation. And the problem is usually solved, after but little investigation, by the adoption of the system with which the managers are most familiar, or by taking a system which has worked well in similar lines of manufacture.

9. Now, among the methods of management in common use there is certainly a great choice; and before describing the "differential rate" system it is desirable to briefly consider the more important of the other methods.

10. The simplest of all systems is the "day-work" plan, in which the employees are divided into certain classes, and a standard rate of wages is paid to each class of men; the laborers all receiving one rate of pay, the machinists all another rate, and the engineers all another, etc. The men are paid according to the position which they fill, and not according to their individual character, energy, skill, and reliability.

11. The effect of this system is distinctly demoralizing and levelling; even the ambitious men soon conclude that since there is no profit to them in working hard, the best thing for them to do is to work just as little as they can and still keep their position. And under these conditions the invariable tendency is to drag them all down even below the level of the medium.

12. The proper and legitimate answer to this herding of men together into classes, regardless of personal character and performance, is the formation of the labor union, and the strike, either to increase the rate of pay and improve conditions of employment, or to resist the lowering of wages and other encroachments on the part of employers.

13. The necessity for the labor union, however, disappears when *men* are paid, and not *positions*; that is, when the employers take pains to study the character and performance of each of their employees and pay them accordingly, when accurate records are kept of each man's attendance, punctuality, the amount and quality of work done by him, and his attitude towards his employers and fellow-workmen.

As soon as the men recognize that they have free scope for the exercise of their proper ambition, that as they work harder and better their wages are from time to time increased, and that they are given a better class of work to do—when they recognize this, the best of them have no use for the labor union.

14. Every manufacturer must from necessity employ a certain amount of day-labor which cannot come under

the piece-work system ; and yet how few employers are willing to go to the trouble and expense of the slight organization necessary to handle their men in this way ? How few of them realize that, by the employment of an extra clerk and foreman, and a simple system of labor returns, to record the performance and readjust the wages of their men so as to stimulate their personal ambition, the output of a gang of twenty or thirty men can be readily doubled in many cases, and at a comparatively slight increase of wages per capita !

15. The clerk in the factory is the particular horror of the old-style manufacturer. He realizes the expense each time that he looks at him, and fails to see any adequate return ; yet by the plan here described the clerk becomes one of the most valuable agents of the company.

16. If the plan of grading labor and recording each man's performance is so much superior to the old day-work method of handling men, why is it not all that is required ? Because no foreman can watch and study all of his men all of the time, and because any system of laying out and apportioning work, and of returns and records, which is sufficiently elaborate to keep proper account of the performance of each workman, is more complicated than piece-work. It is evident that that system is the best which, in attaining the desired result, presents in the long run the course of least resistance.

17. The inherent and most serious defect of even the best managed day-work lies in the fact that there is nothing about the system that is self-sustaining. When

once the men are working at a rapid pace there is nothing but the constant, unremitting watchfulness and energy of the management to keep them there ; while with every form of piece-work each new rate that is fixed insures a given speed for another section of work, and to that extent relieves the foreman from worry.

18. From the best type of day-work to ordinary piece-work, the step is a short one. With good day-work the various operations of manufacturing should have been divided into small sections or jobs, in order to properly gauge the efficiency of the men ; and the quickest time should have been recorded in which each operation has been performed. The change from paying by the hour to paying by the job is then readily accomplished.

19. The theory upon which the ordinary system of piece-work operates to the benefit of the manufacturer is exceedingly simple. Each workman, with a definite price for each job before him, contrives a way of doing it in a shorter time, either by working harder or by improving his method ; and he thus makes a larger profit. After the job has been repeated a number of times at the more rapid rate, the manufacturer thinks that he should also begin to share in the gain, and therefore reduces the price of the job to a figure at which the workman, although working harder, earns, perhaps, but little more than he originally did when on day-work.

20. The actual working of the system, however, is far different. Even the most stupid man, after receiving two or three piece-work "cuts " as a reward for his having worked harder, resents this treatment and seeks a

remedy for it in the future. Thus begins a war, generally an amicable war, but none the less a war, between the workmen and the management. The latter endeavors by every means to induce the workmen to increase the out put, and the men gauge the rapidity with which they work, so as never to earn over a certain rate of wages, knowing that if they exceed this amount the piece-work price will surely be cut sooner or later.

21. But the war is by no means restricted to piece-work. Every intelligent workman realizes the importance, to his own interest, of starting in on each new job as slowly as possible. There are few foremen or superintendents who have anything but a general idea as to how long it should take to do a piece of work that is new to them. Therefore, before fixing a piece-work price, they prefer to have the job done for the first time by the day. They watch the progress of the work as closely as their other duties will permit, and make up their minds how quickly it can be done. It becomes the workman's interest then to go just as slowly as possible and still convince his foreman that he is working well.

22. The extent to which, even in our largest and best managed establishments, this plan of holding back on the work,—“marking time”, or “soldiering”, as it is called—is carried on by the men, can scarcely be understood by one who has not worked among them. It is by no means uncommon for men to work at the rate of one-third, or even one-quarter, their maximum speed, and still preserve the appearance of working hard. And

when a rate has once been fixed on such a false basis it is easy for the men to nurse successfully "a soft snap" of this sort through a term of years, earning in the meanwhile just as much wages as they think they can without having the rate cut.

23. Thus arises a system of hypocrisy and deceit on the part of the men which is thoroughly demoralizing and which has led many workmen to regard their employers as their natural enemies, to be opposed in whatever they want, believing that whatever is for the interest of the management must necessarily be to their detriment.

24. The effect of this system of piece-work on the character of the men is, in many cases, so serious as to make it doubtful whether, on the whole, well managed day-work is not preferable.

25. There are several modifications of the ordinary method of piece-work which tend to lessen the evils of the system, but I know of none that can eradicate the fundamental causes for war, and enable the managers and the men to heartily coöperate in obtaining the maximum product from the establishment. It is the writer's opinion, however, that the differential rate system of piece-work, which will be described later, in most cases entirely harmonizes the interests of both parties.

26. One method of temporarily relieving the strain between workmen and employers consists in reducing the price paid for work, and at the same time guaranteeing the men against further reduction for a definite period. If this period be made sufficiently long, the men are tempted to let themselves out and earn as much

money as they can, thus "spoiling" their own job by another "cut" in rates when the period has expired.

27. Perhaps the most successful modification of the ordinary system of piece-work is the "gain-sharing" plan. This was invented by Mr. Henry R. Towne, in 1886, and has since been extensively and successfully applied by him in the Yale & Towne Manufacturing Co., at Stamford, Conn. It was admirably described in a paper which he read before this Society in 1888. This system of paying men is, however, subject to the serious, and I think fatal, defect that it does not recognize the personal merit of each workman; the tendency being rather to herd men together and promote trades-unionism, than to develop each man's individuality.

28. A still further improvement of this method was made by Mr. F. A. Halsey, and described by him in a paper entitled "The Premium Plan of Paying for Labor," and presented to this Society in 1891. Mr. Halsey's plan allows free scope for each man's personal ambition, which Mr. Towne's does not.

29. Messrs. Towne and Halsey's plans consist briefly in recording the cost of each job as a starting-point at a certain time; then, if, through the effort of the workmen in the future, the job is done in a shorter time and at a lower cost, the gain is divided among the workmen and the employer in a definite ratio, the workmen receiving, say, one-half, and the employer one-half.

30. Under this plan, if the employer lives up to his promise, and the workman has confidence in his integrity, there is the proper basis for coöperation to secure

sooner or later a large increase in the output of the establishment.

Yet there still remains the temptation for the workman to "soldier" or hold back while on day-work, which is the most difficult thing to overcome. And in this as well as in all the systems heretofore referred to, there is the common defect that the starting-point from which the first rate is fixed is unequal and unjust. Some of the rates may have resulted from records obtained when a good man was working close to his maximum speed, while others are based on the performance of a medium man at one-third or one-quarter speed. From this follows a great inequality and injustice in the reward even of the same man when at work on different jobs. The result is far from a realization of the ideal condition in which the same return is uniformly received for a given expenditure of brains and energy. Other defects in the gain-sharing plan, and which are corrected by the differential rate system, are :

(1) That it is slow and irregular in its operation in reducing costs, being dependent upon the whims of the men working under it.

(2) That it fails to especially attract first-class men and discourage inferior men.

(3) That it does not automatically insure the maximum output of the establishment per man and machine.

31. Coöperation, or profit sharing, has entered the mind of every student of the subject as one of the possible and most attractive solutions of the problem; and there have been certain instances, both in England and

France, of at least a partial success of coöperative experiments.

So far as I know, however, these trials have been made either in small towns, remote from the manufacturing centres, or in industries which in many respects are not subject to ordinary manufacturing conditions.

32. Coöperative experiments have failed, and, I think, are generally destined to fail, for several reasons, the first and most important of which is, that no form of coöperation has yet been devised in which each individual is allowed free scope for his personal ambition. This always has been and will remain a more powerful incentive to exertion than a desire for the general welfare. The few misplaced drones, who do the loafing and share equally in the profits with the rest, under coöperation are sure to drag the better men down toward their level.

33. The second and almost equally strong reason for failure lies in the remoteness of the reward. The average workman (I don't say all men) cannot look forward to a profit which is six months or a year away. The nice time which they are sure to have to-day if they take things easily, proves more attractive than hard work with a possible reward to be shared with others six months later.

34. Other and formidable difficulties in the path of coöperation are, the equitable division of the profits, and the fact that, while workmen are always ready to share the profits, they are neither able nor willing to share the losses. Further than this, in many cases it is neither right nor just that they should share either in the profits or the losses, since these may be due in great part to

causes entirely beyond their influence or control, and to which they do not contribute.

35. When we recognize the real antagonism that exists between the interests of the men and their employers under all of the systems of piece-work in common use, and when we remember the apparently irreconcilable conflict implied in the fundamental and perfectly legitimate aims of the two, namely, on the part of the men,—

THE UNIVERSAL DESIRE TO RECEIVE THE LARGEST POSSIBLE WAGES FOR THEIR TIME ;

And on the part of the employers,—

THE DESIRE TO RECEIVE THE LARGEST POSSIBLE RETURN FOR THE WAGES PAID ;

What wonder that most of us arrive at the conclusion that no system of piece-work can be devised which will enable the two to coöperate without antagonism, and to their mutual benefit?

36. Yet it is the opinion of the writer that even if a system has not already been found which harmonizes the interests of the two, still the basis for harmonious coöperation lies in the two following facts :

First. That the workmen in nearly¹ every trade can

¹ The writer's knowledge of the speed attained in the manufacture of textile goods is very limited. It is his opinion, however, that owing to the comparative uniformity of this class of work, and the enormous number of machines and men engaged on similar operations, the maximum output per man and machine is more nearly realized in this class of manufactures than in any other. If this is the case, the opportunity for improvement does not exist to the same extent here as in other trades. Some illustrations of the possible increase in the daily output of men and machines are given in paragraphs 78 to 82.

and will materially increase their present output per day, providing they are assured of a permanent and larger return for their time than they have heretofore received.

Second. That the employers can well afford to pay higher wages per piece even permanently, providing each man and machine in the establishment turns out a proportionately larger amount of work.

37. The truth of the latter statement arises from the well recognized fact that, in most lines of manufacture, the indirect expenses equal or exceed the wages paid directly to the workmen, and that these expenses remain approximately constant, whether the output of the establishment is great or small.

From this it follows that it is always cheaper to pay higher wages to the workmen when the output is proportionately increased: the diminution in the indirect portion of the cost per piece being greater than the increase in wages. Many manufacturers, in considering the cost of production, fail to realize the effect that the *volume of output has on the cost*. They lose sight of the fact that taxes, insurance, depreciation, rent, interest, salaries, office expenses, miscellaneous labor, sales expenses, and frequently the cost of power (which in the aggregate amount to as much as wages paid to workmen), remain about the same whether the output of the establishment is great or small.

38. In our endeavor to solve the piece-work problem by the application of the two fundamental facts above referred to, let us consider the obstacles in the path of

harmonious coöperation, and suggest a method for their removal.

39. The most formidable obstacle is the lack of knowledge on the part of both the men and the management (but chiefly the latter) of the quickest time in which each piece of work can be done; or, briefly, the lack of accurate time-tables for the work of the place.

40. The remedy for this trouble lies in the establishment in every factory of a proper rate-fixing department; a department which shall have equal dignity and command equal respect with the engineering and managing departments, which shall be organized and conducted in an equally scientific and practical manner.

41. The rate-fixing, as at present conducted, even in our best managed establishments, is very similar to the mechanical engineering of fifty or sixty years ago. Mechanical engineering at that time consisted in imitating machines which were in more or less successful use, or in guessing at the dimensions and strength of the parts of a new machine; and as the parts broke down or gave out, in replacing them with the stronger ones. Thus each new machine presented a problem almost independent of former designs, and one which could only be solved by months or years of practical experience and a series of break-downs.

Modern engineering, however, has become a study, not of individual machines, but of the resistance of materials, the fundamental principles of mechanics, and of the elements of design.

42. On the other hand, the ordinary rate-fixing (even

the best of it), like the old-style engineering, is done by a foreman or superintendent who, with the aid of a clerk, looks over the record of the time in which a whole job was done as nearly like the new one as can be found, and then guesses at the time required to do the new job. No attempt is made to analyze and time each of the classes of work, or elements of which a job is composed ; although it is a far simpler task to resolve each job into its elements, to make a careful study of the quickest time in which each of the elementary operations can be done, and then to properly classify, tabulate, and index this information, and use it when required for rate-fixing, than it is to fix rates, with even an approximation to justice, under the common system of guessing.

43. In fact, it has never occurred to most superintendents that the work of their establishments consists of various combinations of elementary operations which can be timed in this way ; and a suggestion that this is a practical way of dealing with the piece-work problem usually meets with derision, or, at the best, with the answer that "It might do for some simple business, but my work is entirely too complicated."

44. Yet this elementary system of fixing rates has been in successful operation for the past ten years, on work complicated in its nature and covering almost as wide a range of variety as any manufacturing that the writer knows of. In 1883, while foreman of the machine shop of the Midvale Steel Company of Philadelphia, it occurred to the writer that it was simpler to time each of the elements of the various kinds of work

done in the place, and then find the quickest time in which each job could be done, by summing up the total times of its component parts, than it was to search through the records of former jobs and guess at the proper price. After practising this method of rate-fixing himself for about a year as well as circumstances would permit, it became evident that the system was a success. The writer then established the rate-fixing department, which has given out piece-work prices in the place ever since.

45. This department far more than paid for itself from the very start; but it was several years before the full benefits of the system were felt, owing to the fact that the best methods of making and recording time observations of work done by the men, as well as of determining the maximum capacity of each of the machines in the place, and of making working-tables and time-tables, were not at first adopted.

46. Before the best results were finally attained in the case of work done by metal-cutting tools, such as lathes, planers, boring mills, etc., a long and expensive series of experiments was made, to determine, formulate, and finally practically apply to each machine the law governing the proper cutting speed of tools, namely, the effect on the cutting speed of altering any one of the following variables: the shape of the tool (*i.e.*, lip angle, clearance angle, and the line of the cutting edge), the duration of the cut, the quality or hardness of the metal being cut, the depth of the cut, and the thickness of the feed or shaving.

47. It is the writer's opinion that a more complicated and difficult piece of rate-fixing could not be found than that of determining the proper price for doing all kinds of machine work on miscellaneous steel and iron castings and forgings, which vary in their chemical composition from the softest iron to the hardest tool steel. Yet this problem was solved through the rate-fixing department and the "differential rate," with the final result of completely harmonizing the men and the management, in place of the constant war that existed under the old system. At the same time the quality of the work was improved and the output of the machinery and the men was doubled, and in many cases trebled. At the start there was naturally great opposition to the rate-fixing department, particularly to the man who was taking time observations of the various elements of the work; but when the men found that the rates were fixed without regard to the records of the quickest time in which they had actually done each job, and that the knowledge of the department was more accurate than their own, the motive for hanging back or "soldiering" on this work ceased, and with it the greatest cause for antagonism and war between the men and the management.

48. As an illustration of the great variety of work to which elementary rate-fixing has already been successfully applied, the writer would state that while acting as general manager of two large sulphite pulp mills he directed the application of piece-work to all of the complicated operations of manufacturing throughout one of

these mills, by means of elementary rate-fixing, with the result, within eighteen months, of more than doubling the output of the mill.

The difference between elementary rate-fixing and the ordinary plan can perhaps be best explained by a simple illustration. Suppose the work to be planing a surface on a piece of cast iron. In the ordinary system the rate-fixer would look through his records of work done by the planing machine, until he found a piece of work as nearly as possible similar to the proposed job, and then guess at the time required to do the new piece of work. Under the elementary system, however, some such analysis as the following would be made :

<i>Work done by Man.</i>	<i>Minutes.</i>
Time to lift piece from floor to planer table	_____
Time to level and set work true on table	_____
Time to put on stops and bolts	_____
Time to remove stops and bolts	_____
Time to remove piece to floor	_____
Time to clean machine	_____

<i>Work done by Machine.</i>	<i>Minutes.</i>
Time to rough off cut $\frac{1}{4}$ in. thick, 4 feet long, $2\frac{1}{2}$ in. wide .	_____
Time to rough off cut $\frac{1}{8}$ in. thick, 3 feet long, 12 in. wide etc.	_____
Time to finish cut 4 feet long, $2\frac{1}{2}$ in. wide	_____
Time to finish cut 3 feet long, 12 in. wide, etc	_____

Total _____

Add ——— per cent. for unavoidable delays _____

It is evident that this job consists of a combination of elementary operations, the time required to do each of which can be readily determined by observation.

This exact combination of operations may never occur again, but elementary operations similar to these will be performed in differing combinations almost every day in the same shop.

A man whose business it is to fix rates soon becomes so familiar with the time required to do each kind of elementary work performed by the men, that he can write down the time from memory.

In the case of that part of the work which is done by the machine, the rate-fixer refers to tables which are made out for each machine, and from which he takes the time required for any combination of breadth, depth, and length of cut.

49. While, however, the accurate knowledge of the quickest time in which work can be done, obtained by the rate-fixing department and accepted by the men as standard, is the greatest and most important step toward obtaining the maximum output of the establishment, it is one thing to know how much work can be done in a day and an entirely different matter to get even the best men to work at their fastest speed or anywhere near it.

50. The means which the writer has found to be by far the most effective in obtaining the maximum output of a shop, and which, so far as he can see, satisfies the legitimate requirements, both of the men and management, is the *differential rate system of piece-work*.

This consists briefly in paying a higher price per piece, or per unit, or per job, if the work is done in the shortest possible time and without imperfections, than is paid if the work takes a longer time or is imperfectly done.

51. To illustrate: Suppose 20 units or pieces to be the largest amount of work of a certain kind that can be done in a day. Under the differential rate system, if a workman finishes 20 pieces per day, and all of these pieces are perfect, he receives, say, 15 cents per piece, making his pay for the day $15 \times 20 = \$3$. If, however, he works too slowly and turns out, say, only 19 pieces, then, instead of receiving 15 cents per piece he gets only 12 cents per piece, making his pay for the day $12 \times 19 = \$2.28$, instead of \$3 per day.

If he succeeds in finishing 20 pieces, some of which are imperfect, then he should receive a still lower rate of pay, say 10 cents or 5 cents per piece, according to circumstances, making his pay for the day \$2, or only \$1, instead of \$3.

It will be observed that this style of piece-work is directly the opposite of the ordinary plan. To make the difference between the two methods more clear: Supposing under the ordinary system of piece-work that the workman has been turning out 16 pieces per day, and has received 15 cents per piece; then his day's wages would be $15 \times 16 = \$2.40$. Through extra exertion he succeeds in increasing his output to 20 pieces per day, and thereby increases his pay to $15 \times 20 = \$3$. The employer, under the old system, however, concludes that \$3 is too much for the man to earn per day, since other men are only getting from \$2.25 to \$2.50, and therefore cuts the price from 15 cents per piece to 12 cents, and the man finds himself working at a more rapid pace and yet earning only the same old wages, $12 \times 20 = \$2.40$ per

day. What wonder that men do not care to repeat this performance many times ?

53. Whether coöperation, the differential plan, or some other form of piece-work be chosen in connection with elementary rate-fixing, as the best method of working, there are certain fundamental facts and principles which must be recognized and incorporated in any system of management before true and lasting success can be attained ; and most of these facts and principles will be found to be not far removed from what the strictest moralists would call justice.

54. The most important of these facts is, that MEN WILL NOT DO AN EXTRAORDINARY DAY'S WORK FOR AN ORDINARY DAY'S PAY ; and any attempt on the part of employers to get the best work out of their men and give them the standard wages paid by their neighbors will surely be, and ought to be, doomed to failure.

55. Justice, however, not only demands for the workman an increased reward for a large day's work, but should compel him to suffer an appropriate loss in case his work falls off either in quantity or quality. It is quite as important that the deductions for bad work should be just, and graded in proportion to the shortcomings of the workman, as that the reward should be proportional to the work done.

The fear of being discharged, which is practically the only penalty applied in many establishments, is entirely inadequate to producing the best quantity and quality of work ; since the workmen find that they can take many liberties before the management makes up its mind to apply this extreme penalty.

56. It is clear that the differential rate satisfies automatically, as it were, the above condition of properly graded rewards and deductions. Whenever a workman works for a day (or even a shorter period) at his maximum, he receives under this system unusually high wages; but when he falls off either in quantity or quality from the highest rate of efficiency his pay falls below even the ordinary.

57. The lower differential rate should be fixed at a figure which will allow the workman to earn scarcely an ordinary day's pay when he falls off from his maximum pace, so as to give him every inducement to work hard and well.

58. The exact percentage beyond the usual standard which must be paid to induce men to work to their maximum varies with different trades and with different sections of the country. And there are places in the United States where the men (generally speaking) are so lazy and demoralized that no sufficient inducement can be offered to make them do a full day's work.

59. It is not, however, sufficient that each workman's ambition should be aroused by the prospect of larger pay at the end of even a comparatively short period of time. The stimulus to maximum exertion should be a daily one.

This involves such vigorous and rapid inspection and returns as to enable each workman in most cases to know each day the exact result of his previous day's work—*i. e.*, whether he has succeeded in earning his maximum pay, and exactly what his losses are for care-

less or defective work. Two-thirds of the moral effect, either of a reward or penalty, is lost by even a short postponement.

60. It will again be noted that the differential rate system forces this condition both upon the management and the workmen, since the men while working under it are above all anxious to know at the earliest possible minute whether they have earned their high rate or not. And it is equally important for the management to know whether the work has been properly done.

61. As far as possible each man's work should be inspected and measured separately, and his pay and losses should depend upon his individual efforts alone. It is, of course, a necessity that much of the work of manufacturing—such, for instance, as running roll-trains, hammers, or paper machines—should be done by gangs of men who coöperate to turn out a common product, and that each gang of men should be paid a definite price for the work turned out, just as if they were a single man.

In the distribution of the earnings of a gang among its members, the percentage which each man receives should, however, depend not only upon the kind of work which each man performs, but upon the accuracy and energy with which he fills his position.

In this way the personal ambition of each of a gang of men may be given its proper scope.

62. Again, we find the differential rate acting as a most powerful lever to force each man in a gang of workmen to do his best ; since if, through the careless-

ness or laziness of any one man, the gang fails to earn its high rate, the drone will surely be obliged by his companions to do his best the next time or else get out.

63. A great advantage of the differential rate system is that it quickly drives away all inferior workmen and attracts the men best suited to the class of work to which it is applied, since none but really good men can work fast enough and accurately enough to earn the high rate ; and the low rate should be made so small as to be unattractive even to an inferior man.

64. If for no other reason that it secures to an establishment a quick and active set of workmen, the differential rate is a valuable aid, since men are largely creatures of habit, and if the piece-workers of a place are forced to move quickly and work hard the day-workers soon get into the same way, and the whole shop takes on a more rapid pace.

65. The greatest advantage, however, of the differential rate for piece-work, in connection with a proper rate-fixing department, is that together they produce the proper mental attitude on the part of the men and the management toward each other. In place of the indolence and indifference which characterize the workmen of many day-work establishments and to a considerable extent also their employers, and in place of the constant watchfulness, suspicion, and even antagonism with which too frequently the men and the management regard each other under the ordinary piece-work plan, both sides soon appreciate the fact that with the differential rate it is their common interest to coöperate to the

fullest extent, and to devote every energy to turning out daily the largest possible output. This common interest quickly replaces antagonism and establishes a most friendly feeling.

66. Of the two devices for increasing the output of a shop, the differential rate and the scientific rate-fixing department, the latter is by far the more important. The differential rate is invaluable at the start as a means of convincing men that the management is in earnest in its intention of paying a premium for hard work, and it at all times furnishes the best means of maintaining the top notch of production; but when, through its application, the men and the management have come to appreciate the mutual benefit of harmonious coöperation and respect for each other's rights, it ceases to be an absolute necessity. On the other hand, the rate-fixing department, for an establishment doing a large variety of work, becomes absolutely indispensable. The longer it is in operation the more necessary it becomes.

67. Practically, the greatest need felt in an establishment wishing to start a rate-fixing department is the lack of data as to the proper rate of speed at which work should be done.

There are hundreds of operations which are common to most large establishments; yet each concern studies the speed problem for itself, and days of labor are wasted in what should be settled once for all and recorded in a form which is available to all manufacturers.

68. What is needed is a hand-book on the speed with which work can be done, similar to the elementary en-

gineering hand-books. And the writer ventures to predict that such a book will, before long, be forthcoming. Such a book should describe the best method of making, recording, tabulating, and indexing time-observations, since much time and effort are wasted by the adoption of inferior methods.

69. The term "rate-fixing department," has rather a formidable sound. In fact, however, that department should consist in most establishments of one man, who in many cases need give only a part of his time to the work.

70. When the manufacturing operations are uniform in character and repeat themselves day after day—as, for instance, in paper or pulp mills—the whole work of the place can be put upon piece-work in a comparatively short time; and when once proper rates are fixed the rate-fixing department can be dispensed with, at any rate until some new line of manufacture is taken up.

71. The system of differential rates was first applied by the writer to a part of the work in the machine shop of the Midvale Steel Company, in 1884. Its effect in increasing and then maintaining the output of each machine to which it was applied was almost immediate, and so remarkable that it soon came into high favor with both the men and the management. It was gradually applied to a great part of the work of the establishment, with the result, in combination with the rate-fixing department, of doubling and in many cases trebling the output, and at the same time increasing instead of diminishing the accuracy of the work.

72. In some cases it was applied by the rate-fixing department without an elementary analysis of the time required to do the work, simply offering a higher price per piece providing the maximum output before attained was increased to a given extent. Even this system met with success although it is by no means correct, since there is no certainty that the reward is in just proportion to the efforts of the workmen.

73. In cases where large and expensive machines are used, such as paper machines, steam hammers, or rolling mills, in which a large output is dependent upon the severe manual labor as well as the skill of the workmen (while the chief cost of production lies in the expense of running the machines rather than in the wages paid), it has been found of great advantage to establish two or three differential rates, offering a higher and higher price per piece or per ton as the maximum possible output is approached.

74. As before stated, not the least of the benefits of elementary rate-fixing are the indirect results.

The careful study of the capabilities of the machines and the analysis of the speeds at which they must run, before differential rates can be fixed which will insure their maximum output, almost invariably result in first indicating and then correcting the defects in their design and in the method of running and caring for them.

75. In the case of the Midvale Steel Company, to which I have already referred, the machine shop was equipped with standard tools furnished by the best makers, and the study of these machines, such as lathes,

planers, boring mills, etc., which was made in fixing rates, developed the fact that they were none of them designed and speeded so as to cut steel to the best advantage. As a result, this company has demanded alterations from the standard in almost every machine which they have bought during the past eight years. They have themselves been obliged to superintend the design of many special tools which would not have been thought of had it not been for elementary rate-fixing.

76. But what is perhaps of more importance still, the rate-fixing department has shown the necessity of carefully systematizing all of the small details in the running of each shop, such as the care of belting, the proper shape for cutting tools, and the dressing, grinding, and issuing same, oiling machines, issuing orders for work, obtaining accurate labor and material returns, and a host of other minor methods and processes. These details, which are usually regarded as of comparatively small importance, and many of which are left to the individual judgment of the foreman and workmen, are shown by the rate-fixing department to be of paramount importance in obtaining the maximum output, and to require the most careful and systematic study and attention in order to insure uniformity and a fair and equal chance for each workman. Without this preliminary study and systematizing of details it is impossible to apply successfully the differential rate in most establishments.

77. As before stated, the success of this system of piece-work depends fundamentally upon the possibility of materially increasing the output per man and per

machine, providing the proper man be found for each job and the proper incentive be offered to him.

78. As an illustration of the difference between what ought to be done by a workman well suited to his job, and what is generally done, I will mention a single class of work, performed in almost every establishment in the country. In shovelling coal from a car over the side on to a pile one man should unload forty tons per day, and keep it up year in and year out, and thrive under it.

With this knowledge of the possibilities I have never failed to find men who were glad to work at this speed for from four and a half to five cents per ton. The average speed for unloading coal in most places, however, is nearer fifteen than forty tons per day. In securing the above rate of speed it must be clearly understood that the problem is not how to force men to work harder or longer hours than their health will permanently allow, but rather first to select among the laborers which are to be found in every community the men who are physically able to work permanently at that job and at the speed mentioned without damage to their health, and who are mentally sufficiently inert to be satisfied with the monotony of the work, and then to offer them such inducements as will make them happy and contented in doing so.

79. The first case in which a differential rate was applied furnishes a good illustration of what can be accomplished by it.

A standard steel forging, many thousands of which are used each year, had for several years been turned at

the rate of from four to five per day under the ordinary system of piece-work, 50 cents per piece being the price paid for the work. After analyzing the job and determining the shortest time required to do each of the elementary operations of which it was composed, and then summing up the total, the writer became convinced that it was possible to turn ten pieces a day. To finish the forgings at this rate, however, the machinists were obliged to work at their maximum pace from morning to night, and the lathes were run as fast as the tools would allow, and under a heavy feed.

It will be appreciated that this was a big day's work, both for men and machines, when it is understood that it involved removing, with a single 16-inch lathe having two saddles, an average of more than 800 pounds of steel chips in ten hours. In place of the 50-cent rate that they had been paid before, they were given 35 cents per piece when they turned them at the speed of 10 per day, and when they produced less than 10 they received only 25 cents per piece.

80. It took considerable trouble to induce the men to turn at this high speed, since they did not at first fully appreciate that it was the intention of the firm to allow them to earn permanently at the rate of \$3.50 per day. But from the day they first turned 10 pieces to the present time, a period of more than ten years, the men who understood their work have scarcely failed a single day to turn at this rate. Throughout that time, until the beginning of the recent fall in the scale of wages throughout the country, the rate was not cut.

81. During this whole period the competitors of the company never succeeded in averaging over half of this production per lathe, although they knew and even saw what was being done at Midvale. They, however, did not allow their men to earn over from \$2 to \$2.50 per day, and so never even approached the maximum output.

82. The following table will show the economy of paying high wages under the differential rate in doing the above job.

COST OF PRODUCTION PER LATHE PER DAY.

<i>Ordinary system of piece-work.</i>		<i>Differential rate system.</i>	
Man's wages	\$2 50	Man's wages	\$3 50
Machine cost	3 37	Machine cost	3 37
Total cost per day . .	\$5 87	Total cost per day . .	\$6 87
5 pieces produced.		10 pieces produced.	
Cost per piece	\$1 17	Cost per piece	\$0 69

The above result was mostly, though not entirely, due to the differential rate. The superior system of managing all of the small details of the shop counted for considerable.

83. There has never been a strike by men working under differential rates, although these rates have been applied at the Midvale Steel Works for the past ten years, and the steel business has proved during this period the most fruitful field for labor organizations and strikes. And this notwithstanding the Midvale Company has never prevented its men from joining any labor organization. All of the best men in the company saw clearly that the success of a labor organization

meant the lowering of their wages in order that the inferior men might earn more, and of course could not be persuaded to join.

84. I attribute a great part of this success in avoiding strikes to the high wages which the best men were able to earn with the differential rates, and to the pleasant feeling fostered by this system; but this is by no means the whole cause. It has for years been the policy of that company to stimulate the personal ambition of every man in their employ, by promoting them either in wages or position whenever they deserved it and the opportunity came.

A careful record has been kept of each man's good points as well as his shortcomings, and one of the principal duties of each foreman was to make this careful study of his men, so that substantial justice could be done to each. When men throughout an establishment are paid varying rates of day-work wages according to their individual worth, some being above and some below the average, it cannot be for the interest of those receiving high pay to join a union with the cheap men.

85. No system of management, however good, should be applied in a wooden way. The proper personal relations should always be maintained between the employers and men; and even the prejudices of the workmen should be considered in dealing with them.

The employer who goes through his works with kid gloves on, and is never known to dirty his hands or clothes, and who either talks to his men in a condescend-

ing or patronizing way, or else not at all, has no chance whatever of ascertaining their real thoughts or feelings.

86. Above all it is desirable that men should be talked to on their own level by those who are over them.

Each man should be encouraged to discuss any trouble which he may have, either in the works or outside, with those over him. Men would far rather even be blamed by their bosses, especially if the "tearing out" has a touch of human nature and feeling in it, than to be passed by day after day without a word and with no more notice than if they were part of the machinery.

The opportunity which each man should have of airing his mind freely and having it out with his employers, is a safety-valve ; and if the superintendents are reasonable men, and listen to and treat with respect what their men have to say, there is absolutely no reason for labor unions and strikes.

87. It is not the large charities (however generous they may be) that are needed or appreciated by workmen, such as the founding of libraries and starting workingmen's clubs, so much as small acts of personal kindness and sympathy, which establish a bond of friendly feeling between them and their employers.

88. The moral effect of the writer's system on the men is marked. The feeling that substantial justice is being done them renders them on the whole much more manly, straightforward, and truthful. They work more cheerfully, and are more obliging to one another and their employers. They are not soured, as under the old system, by brooding over the injustice done them ; and

their spare minutes are not spent to the same extent in criticising their employers.

A noted French engineer and steel manufacturer, who recently spent several weeks in the works of the Midvale Company in introducing a new branch of manufacture, stated before leaving that the one thing which had impressed him as most unusual and remarkable about the place was the fact that not only the foremen but the workmen were expected to and did in the main tell the truth in case of any blunder or carelessness, even when they had to suffer from it themselves.

89. From what the writer has said he is afraid that many readers may gain the impression that he regards elementary rate-fixing and the differential rate as a sort of panacea for all human ills.

This is, however, far from the case. While he regards the possibilities of these methods as great, he is of the opinion, on the contrary, that this system of management will be adopted by but few establishments, in the near future at least, since its really successful application not only involves a thorough organization but requires the machinery and tools throughout the place to be kept in such good repair that it will be possible for the workmen each day to produce their maximum output. But few manufacturers will care to go to this trouble until they are forced to.

90. It is his opinion that the most successful manufacturers, those who are always ready to adopt the best machinery and methods when they see them, will gradually avail themselves of the benefits of scientific

rate-fixing; and that competition will compel the others to follow slowly in the same direction.

91. Even if all of the manufacturers in the country who are competing in the same line of business were to adopt these methods, they could still well afford to pay the high rate of wages demanded by the differential rate and necessary to induce men to work fast, since it is a well recognized fact the world over, that the highest-priced labor, providing it is proportionately productive, is the cheapest; and the low cost at which they could produce their goods would enable them to sell in foreign markets and still pay high wages.

92. The writer is far from taking the view held by many manufacturers that labor unions are an almost unmitigated detriment to those who join them, as well as to employers and the general public.

The labor unions—particularly the trades unions of England—have rendered a great service, not only to their members but to the world, in shortening the hours of labor and in modifying the hardships and improving the conditions of wage-workers.

In the writer's judgment the system of treating with labor unions would seem to occupy a middle position among the various methods of adjusting the relations between employers and men.

When employers herd their men together in classes, pay all of each class the same wages, and offer none of them any inducements to work harder or do better than the average, the only remedy for the men lies in combination; and frequently the only possible answer to encroachments on the part of their employers is a strike.

This state of affairs is far from satisfactory to either employers or men, and the writer believes the system of regulating the wages and conditions of employment of whole classes of men by conference and agreement between the leaders, unions, and manufacturers to be vastly inferior, both in its moral effect on the men and on the material interests of both parties, to the plan of stimulating each workman's ambition by paying him according to his individual worth, and without limiting him to the rate of work or pay of the average of his class.

93. The level of the great mass of the world's labor has been, and must continue to be, regulated by causes so many and so complex as to be at best but dimly recognized.

The utmost effect of any system, whether of management, social combination, or legislation, can be but to raise a small ripple or wave of prosperity above the surrounding level, and the greatest hope of the writer is that here and there a few workmen, with their employers, may be helped through this system toward the crest of the wave.

THE POPULIST MOVEMENT

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THE POPULIST MOVEMENT.

I.

THE PLATFORM HISTORY OF THE PEOPLE'S PARTY.

The last five years have been remarkable for the rapid rise of the political party now known as the People's Party. It has extended from one state into another until there is an organization in every state, not to mention the territories. Although including a part of the discontented of the towns and cities, it can best be defined as a class movement chiefly confined, so far as membership is concerned, to men engaged in agriculture. The complaint of the party has been that prices of farm products are low, that the farmers' revenue is much less than formerly, and that monopolies are crushing the small producer and taxing the consumer. The first two are declared to be the result of financial, the last of industrial, legislation.

The object of the party is to secure relief for the farming and laboring classes. The justification of this object is found in the decline in prices and the heavy burden of debts, made doubly so by the change in money standards. Legislation is looked upon as the means to secure an improved condition; hence the formation of a political party. The government is thus the all powerful lever by which better times are to be brought about.

This third party, however, was not the growth of a day. Its formation was due to changes in modes of agriculture and manufacturing introduced soon after the Civil War. Machinery had a potent effect upon agriculture, and the products of the farm were rapidly increased. A decline in prices followed, which has continued almost uninterruptedly ever since, resulting in the early formation of agricultural organizations in an effort to stay the decline. ¹ The Grange of 1867, the Farmers' Alliance of 1879, the Agricultural Wheel, 1878, and others were the forerunners of this organized movement.² Efforts were made from time to time to join all societies of this kind into one great combination for political purposes. Although many members of the societies had been disturbed by the third party idea, it was not until 1890 that any great progress was made in the matter. In this year began a series of conventions which finally resulted in the formation of the party under consideration.

There are five of these conventions whose proceedings interest the student of the People's Party. Two of them were not Populist assemblies, but the meetings of

¹ There are three stages of advancement in farmers' organizations. These are seen in the Grange, the Farmers' Alliance and the People's Party. The aim of the Grange was to educate the farmer, and protect its members by influence only. The Farmers' Alliance is a combination of independent agricultural lodges and associations. It started in Texas as early as 1879 and developed in a few years into a well organized association. There are also other societies in the North and South which together with those mentioned went to make up the party. See Appendix A.

² Appendix A.

organized societies showing symptoms of the third party fever. They were held previous to the real beginning of the party, but belong nevertheless to the series of conventions which have given us so many new ideas as to the way in which we should be governed. The first one in which the idea of a third party appeared was held in St. Louis, December 6, 1889. It consisted of delegates from the farmer's organization and from the Knights of Labor. The object of the meeting was to effect a union between the two classes, which was accomplished under the name of the Farmers' Alliance and Industrial Union.¹ Although this organization wisely deferred its entrance into politics as a party, it nevertheless, passed some resolutions concerning the free coinage of silver, abolition of national banks, sub-treasuries, plenty of paper money, government ownership of railroads, non-ownership of land by foreigners, prohibition of futures in grain, and the reduction of the nation's income to expenses.² Notice, then, that all these measures are economic, none of them even remotely verging upon politics. On December 7th of the following year (1890) another convention³ was held at Ocala, Florida. The composition of this assembly was somewhat different from that of the preceding one. Members of the

¹ *Political Science Quarterly*, Vol. VI. p. 284.

² See *New York Times*, December 8, 9, 1889; *New York Tribune*, December 8, 9, 1889; *Public Opinion*, December, 1889.

³ The Ocala and St. Louis conventions have been selected from the fact that they are more often spoken of than the Washington convention of January, 1891, and the Northern Alliance convention of 1890. At these conventions little was accomplished. The Ocala platform was endorsed.

Southern Alliance, the Farmers' Mutual Benefit Association, and the colored Alliance were present. Here again the third party idea remained unpronounced.¹ The platform issued at Ocala differed in very few respects from that of 1889. The sub-treasury scheme was not endorsed as in the year before, and the government ownership of railroads and telegraphs was changed to government control. A reduction of heavy tariff duties was here demanded, and this is the only out and out demand of the kind made in the five platforms. The others content themselves with the statement that the revenue of state and nation should be limited to expenses.

The Cincinnati gathering represented no real purpose at the time of its meeting. It was composed of the discontented and the ambitious, and was not representative of any large number of voters. The convention opened with the singing of "America" and the Lord's Prayer. These were given with an earnestness that spoke well for the convention,² and showed that they came from the honest, sturdy, farming class that has so often been the stay of the country, and whose tendency has been toward conservatism rather than toward radicalism. The proportion of the delegates from the various states was very unequal. About two-thirds of the states were represented, but out of the fifteen hundred persons present, four hundred and seven were from Kansas,

¹ See *Cincinnati Gazette*, May 19, 20, 21, 23, 1890; *New York Times*, same dates; *New York Tribune*, same dates. Compare with Ocala platform.

² See *New York Times*, May 19, 1891.

three hundred and seventeen from Ohio, and one hundred from Illinois.¹ The majority of the assembly were farmers, while the remainder consisted of representatives of the various labor societies. The purposes of the men were widely divergent and the movement to make a third party was by no means unanimous throughout the country. In vain some of the leaders protested against the formation of a party at that time, hoping to defer the matter until the following year. Their opposition was brushed aside and the party was launched with a platform. The platform is based on the Ocala platform, but contains some political measures, and a few Knights of Labor pledges, such as the eight hour day. The planks of the platform are as follows: free coinage of silver, abolition of national banks, loans on land and real estate, sub-treasuries, income tax, plenty of paper money, government control of railroads, election of President, Vice-President and Senators by direct vote, non-ownership of land by foreigners, revenue of the state and nation limited to expenses, eight hours' work, and universal suffrage. Three of these measures are sops thrown to certain classes. The election of President, Vice-President and Senators by popular vote is a bait for votes. So is the universal suffrage scheme. The eight hour plank was adopted only after much objection on the part of the farmer, for he sometimes has to work sixteen hours and never less than twelve, so that he is not naturally in sympathy with the eight

¹ See *New York Times*, May 19, 20, 1891; *Cincinnati Gazette*, same date; also *New York Tribune*.

hour movement. Policy sways him, however, and so this plank was added to the list.

The St. Louis convention was held some ten months later, February 22, 1892. This was the preliminary convention for the selection of a national committee with the power to call a national convention to nominate candidates for President and Vice-President. The convention was by no means harmonious, for there was a contest between the Southern Alliance and some of the northern members for supremacy in the convention. It ended in victory for the northern faction. This convention again framed a platform, containing nearly the same planks as the year before. The planks referring to the abolition of national banks, universal suffrage, direct election of President, Vice-President and Senators, and government control of railroads and telegraphs, were omitted. In the place of government control, government ownership of railroads was substituted. A scheme for postal banks was also tacked on.

The Populists now cut loose from their former platforms, and based all their speeches, demands and speculations on the next platform,—that of Omaha. The Omaha convention¹ was the first Presidential nominating convention held by the People's Party. The delegates assembled on July 4, 1892, closely watched by the press and people of the country. It was recognized as a turning point in the history of the new party, which would either put itself on record as favoring sensible measures, or it would not. The platform of this con-

¹See the newspapers of that date : St. Paul *Globe*, Chicago *Tribune*, Omaha *Bee*, July 5, 6, 7, 8, 1892.

vention bears the same stamp as did the others. Free coinage of silver, a minor clause on abolition of national banks, a sub-treasury scheme or some similar system, a graduated income tax, plenty of paper money, government ownership of railroads, election of Senators by direct vote of the people, non-ownership of land by foreigners, revenue of state and nation limited to expenses, eight hours' work, postal banks, pensions, and prohibition of the present contract law and immigration system,—these were the measures advocated. The various platforms have been on the whole very much alike. There has been, however, a gradual increase in the number of demands. The St. Louis platform of 1889 contains only eight planks, the Ocala eight, Cincinnati twelve, St. Louis, 1892, ten, and the Omaha thirteen. Free coinage, government control or ownership of railroads, the sub-treasury scheme, sufficient paper money, revenue of state limited to expenses, and non-ownership of land by foreigners, are the demands put forth in every platform. During the last three years nothing has been said about the prohibition of futures. The trade in futures has been one of the chief elements of complaint among the farmers; but the party has abandoned it as an issue. The real issue, according to the Populist, is financial. The party, by taking one side of the money question, hopes to force one of the old parties out of the field, and thus to place itself in a position of power as one of two parties, instead of being a mere third party.

ATTITUDE OF THE DIFFERENT CONVENTIONS TOWARD THE VARIOUS ISSUES.

	1889 St. Louis, Dec. 6.	1890 Ocala, Dec. 7.	1891 Cincinnati, May 20.	1892 St. Louis, Feb. 22.	1892 Omaha July 4.
Free coinage of silver . . .	*	*	*	*	*
Abolition of national banks	*	*	*	*	*
Loans on land, real estate			*	*	
Sub-treasuries	*		*	*	* ¹
Income tax			*	*	*
Tariff revision		*			
Sufficient paper money . . .	*	*	*	*	*
Government control of rail- roads, etc.		*	*		
Government ownership of railroads	*			*	*
Election of president and vice-president, and sena- tors by direct vote			*		* ²
Non-ownership of land by foreigners	*	*	*	*	*
Prohibition of futures in grain, etc.	*	*			
Revenue of state and nation limited to expenses	*	*	*	*	*
Eight hours' work			*	*	*
Universal suffrage			*		
Postal banks				*	*
Pensions					*
Oppose present contract law and immigration system					*

* The asterisk denotes that the platform contained the plank indicated.

¹ "Sub-treasuries or a better system."

² To Senators alone.

II.

THE OMAHA PLATFORM.

The Omaha platform is the last of the national Populist platforms.¹ It contains the most advanced theories and demands of the new party. In fact, the older platforms are seldom mentioned in the literature of the organization or by the speakers who present its cause. But the Omaha platform is called a second Declaration of Independence,—an idea probably suggested, not by any material which the platform contains, but by the day, July 4th, on which the convention assembled. The preamble of the platform is the most curious part of the entire production. After invoking the blessing of Almighty God upon the convention, it goes on to say that “We meet in the midst of a nation brought to the verge of moral, political, and material ruin. Corruption dominates the ballot box, the legislatures, the Congress, and even touches the ermine on the bench. The people are demoralized. The newspapers are largely subsidized or muzzled, public opinion silenced, business prostrated, our homes covered with mortgages, labor impoverished, and the land concentrated in the hands of the capitalists. Urban workmen are denied the right of organizing; imported pauperized labor reduces their wages, while a

¹ The St. Louis platform of July 22, 1896, is very similar to the Omaha platform of 1892. The former is the more elaborate production.

hireling army shoots them down. The toils of the millions are stolen to build up colossal fortunes. From the prolific womb of governmental injustice we breed the two great classes—tramps and millionaires.” After this description of the condition of the country, the preamble goes on to speak of the contraction of the currency and demonetization of silver. It calls attention to a “conspiracy against mankind,” in which the currency is to be “abridged in order to fatten usurers, bankrupt enterprise, and enslave industry.” Then follows an arraignment of the existing parties with their attempts to “drown the outcries of a plundered people with the uproar of a sham battle over the tariff, so that capitalists, corporations, national banks, trusts, watered stock, the demonetization of silver and the oppressions of the usurers may be lost sight of.” After a statement of the belief that “the Republic cannot live unless based upon the love of the whole people for each other and for the nation,” and a pledge “to correct the evils which are destroying it, with wise and reasonable legislation,” the preamble ends with the three following doctrines :

I. “That the union of labor forces of the United States this day consummated shall be permanent and perpetual.”

II. That “Wealth belongs to him who creates it, and every dollar taken from industry is robbery.”

III. That the people should own the means of transportation ; and should such a thing come to pass, there should be a rigid civil service regulation, so as to prevent the increase of the power of the national administration by the use of such additional government employees.

Such is the remarkable address which precedes the platform of the new party. It depicts a condition of the country which the inquiring mind is unable to substantiate. It arraigns the political parties as separate from the people and lays at their feet the responsibility for the condition of affairs. But the parties which have brought about these calamities are composed of the people, and their effort of self-government must, in consequence, have brought them to the state described in the preamble: a people who, if such a condition exists, are not capable of governing themselves; a people who must have been deficient in ability to grasp the first principles of economics; a people who are unable to see and much less to follow their own interests. Nevertheless these people are to be intrusted with greater responsibilities and greater opportunities to make or mar themselves—not by the parties which have already brought them where they are, but by the one which poses as their savior. There is an apparent incongruity when one views the subject from this last standpoint, as well as a strong impression that the address has been injured by over-statement.

The real platform which follows is much less ardent and, therefore, demands more serious attention. It can be divided into minor and major planks. The minor planks treat of the tariff, pensions, contract labor laws, an eight hour working day, and election of Senators by the people. The major planks relate to currency, re-establishment of silver, government ownership of railroads, and the limited ownership of lands. This division,

while somewhat arbitrary, has nevertheless a natural basis, in that the party considers the problems of money, land, and railroads as the most important.

In the past, the tariff has always occupied an important place in the platforms of political parties. The contests of the last ten or twelve years have been fought with this question as the main issue. Notwithstanding the strong hold which the tariff has upon political parties, the People's Party has deemed it best to pass by this bone of contention. The word tariff is not used in the Omaha platform, and there is very little to indicate the position of the party in regard to it. In the last lines of one of the sections is found the statement: "We demand that all state and national revenues shall be limited to the necessary expenses of the government, economically and honestly administered." We are told that this part of the section contains the party's views on the tariff. The refusal to make a definite statement is not altogether inconsistent with the party's opinion that the tariff subject is a back number, that it is either already decided or at least less important than the currency question.

Both of the old parties maintain that the view thus ambiguously stated is in accord with their platforms. Curious editorials have appeared in the papers of the South and West upholding the claim that the new party's tariff views are not antagonistic to Democratic or to Republican principles. This has been the case when either of the old parties was trying to engineer a fusion with the Populists. The Democrats regarded the

section as in perfect accord with the declaration, "tariff for revenue only," while the Republicans were no less vehement in their protestations that it was in harmony with their doctrine of "protection with incidental revenues."

In reality the stand of the party on this point is nothing more than a "straddle." In the Populist ranks are two factions which must be satisfied,—the laborers, who suppose that high wages and protection are somehow connected, and the farmers, who receive no protection and because of protection have to pay higher prices for what they buy. This apparent indecision of the party is due to the real antagonism of these two classes. Coupled with this antagonism was the necessity of drawing votes from the old parties. As both sides of the tariff question are already represented by the two old parties, it was perfectly natural that the new one should attempt to avoid any declaration on this subject. What are the "necessary expenses" of a government? They cannot be easily determined. A progressive government needs a great deal of money for "necessary expenses;" very heavy taxes (tariff or revenue) might be needed to meet its demands.

The section on the abolition of national banks was necessitated by the general money plans of the party. The tendency has been toward the reduction of the circulation of national banks and a minimum use of their function of note-issue. The People's Party regards the national banks as responsible for the decline in circulation; but it is really due to the fact that note-issue is no

longer profitable. The party complains that the national banks do not perform the functions which they are bound by law to do, and demands their abolition. In suggesting such a change, the Populists must undertake to provide a currency suited to the needs of the country. This has not been done, except through the sub-treasury scheme, which is by no means accepted by the party as a whole. The plank was placed in the platform to satisfy the general prejudice against national banks, which are regarded as direct roads to wealth.

The characterization of the present contract and immigration laws as inefficient, coupled with the demand for their abolition, was undoubtedly a concession to the labor societies, which were represented at the convention by delegates. Naturally the farmer is not opposed to immigration; for he is an employer of labor, and the influx of immigrants into the more unsettled regions of the South and West enables him more easily to harvest his crops and enlarge his business. It is much the same as an increase of his capital, because it increases the number of laborers and thus lowers the price of labor. The farming element, too, objected to the plank favoring eight hours' work for the laboring man, when the farmer is compelled to toil from twelve to sixteen hours. But in order to win this element it was necessary to introduce the clause favoring the eight hour day. The platform also favors pensions,—a patriotic thing, but smacking somewhat of political effect. Yet the party could hardly remain silent on the question.

The election of Senators by the people can not be

called a political issue ; but the People's party, in voicing the sentiment that Senators shall be elected by the people, has done a good thing.

The reader can easily observe from the analysis of the planks given thus far that there is a contradiction in some of them, in others evident attempts to please two factions. In fact it must not be taken for granted that all the members of the party favored all the measures set forth in the platform. The planks as a whole were compromises. In the Ocala convention there were elements which favored free coinage, but were against the sub-treasury scheme ; another clique wanted a graduated income tax, but refused to vote for government ownership of telegraphs and railroads. In the Omaha platform, however, these were brought in and became the most prominent demands. The transition was not accomplished without bitter contests. The radicals of the party pulled the conservatives into line and succeeded in putting their stamp on the platform. But as the party grows older it is likely to get to more solid ground ; for experience will teach the rank and file that success does not lie in radicalism. Meanwhile there are two factions in the party, between whom there may not at present be any broad line of distinction. This is due to the fact that one faction, representing the laborer, is greatly inferior in numbers to the other, the farmers. The movement originated among the agriculturists and it is they who are carrying along the laborer while trying to advance their own cause at the same time. There is no real common bond between the two except that of dis-

content. On the question of capital *vs.* labor, there is, indeed, some common ground, since the farmer believes he is oppressed by the "gold-bug"; and here the two factions at present have a common interest.

Although the farmer does not want eight hours' labor, or restricted immigration, he does not object strenuously to either one. In fact they are, in a way, a matter of indifference to him; he allows them to be included in the platform and as a matter of policy he considers it best to put them there; but these are only minor details. Will he give way or compromise, however, when it comes to more important things? Just here is where the party is liable to be wrecked,—through internal conflict. The feelings of the more advanced will be apt to clash with those of the more conservative. Moreover, the tendency to compromise in order to gain votes and favor from certain interests will undoubtedly pervert the party intentions and ideals.

III.

LAND, FARMS, AND MORTGAGES.

The land, including all the natural sources of wealth, is the heritage of the people, and should not be monopolized for speculative purposes, and alien ownership of land should be prohibited. All land now held by railroads and other corporations in excess of their actual needs, and all lands now owned by aliens should be reclaimed by the government and held for actual settlers only.—*Omaha Platform*.

At the close of the Revolutionary war, the states of the old confederation found, among other things, a land question confronting them. The land extending from the Alleghanies to the Mississippi river was claimed by Virginia, North and South Carolina, and Georgia, as well as by New York, Pennsylvania and Connecticut. By a series of magnanimous gifts, most of the states surrendered to Congress these conflicting claims. These gifts were the foundation of what is known as the Public Domain. To this early possession the United States has added through purchase, cession, and conquest, lands more extensive in area than all the countries of Europe excepting Russia.

This Public Domain has always been regarded as belonging to the people, and it has been the policy of Congress to place them in possession of the lands as fully as possible. The doctrine that the prosperity of the people must rest largely on the possession and cultivation of our extensive territory has been kept well in mind during the last seventy-five years, and the result

has been that land has been distributed liberally, even though without much regard to the ultimate possessor. This was done primarily to maintain a continual progress in population and development of the country.

The sum total of the various lands composing the Public Domain at different times was in 1890, 2,894,235.91 square miles, or 1,852,310,987 acres. The actual domain which came into the possession of the United States was only 1,821,700,922 acres; for the area now composing the state Tennessee had been granted before the formation of the Union.¹ This vast amount of territory was not acquired in a single year, but by skilful negotiations and careful treaties extending over a period of seventy-five years, the Gadsden purchase of 1850 being the last.² At an early date the government granted a considerable number of acres in the Ohio valley to the soldiers of the Revolution as a reward for their services, and allowed them afterwards to purchase land at a small price. Then came the idea that the sale of the public lands would relieve the people of an equal amount of taxes. So land was disposed of by public and private sale until 1848, when the policy of sales was changed. The soldiers of the Mexican war were allowed one hundred and sixty acres each. Under the pre-emption system, first inaugurated in 1838, the lands were sold for cash to settlers who could occupy, improve and cultivate them for a number of years; but the Homestead act provided for the gift of land to the actual settler. The Homestead

¹ Donaldson, "Public Domain," p. 10.

² Alaska was bought in 1867, but it is considered more as a dependent than a part of the states.

act was passed in 1862, although the agitation for it began some ten years earlier.¹ By these two acts the early idea of sales for revenue was abandoned, and a plan for the disposition of homes substituted, which was more in line with the general policy of the government.

Out of the original 1,821,700,922 acres of public lands, [399,755,118 acres of this are said to be mountainous] there remained in 1890, vacant and unoccupied, 586,216,861 acres, or less than one-third of the original domain. Up to 1890 the United States had granted to corporations and states, for canals, railroads, river improvements, and wagon roads, 337,740,081 acres, leaving some 430,948,710 acres to be accounted for by the Pre-emption and Homestead acts, military bounties, and lands held by railroads but not patented up to June 30, 1890. This makes a grand total of 768,688,991 acres that have passed out of the possession of the United States during the last hundred years. Of the 586,216,867 acres now in the hands of the government, only 1,700,000 are suitable for agriculture, the remainder consisting of grazing, coal and mineral lands.

The tendency at first was to regard the public lands as a means of revenue, and large quantities of land were sold to capitalists and speculators; but the income received did not come up to expectations, and the continual clamor of the people that the Public Domain belonged to the public, compelled the government to change its policy. Under the Pre-emption law the actual settler was given the preference and protection of

¹ "The Public Domain," pp. 332-356.

the government. Many settlements were made under the law, although the vastness of the territory and the inability to locate all the claims enabled sharpers to manipulate the law to their advantage. On the other hand, it enabled settlers to secure 640 acres of land—as much as any man needed—at a low price. The Homestead law was a further increase of the generosity of the government: under it, the West was rapidly settled. Like the Pre-emption act, it was greatly abused, and the loose taxation laws made it possible to hold property without any expense. As land was pre-empted, and small towns sprang into existence, there came also the necessity for railroads. March 2, 1833, Congress authorized the state of Illinois to divert the canal grant of six years before, and to construct a railroad with the proceeds of said lands.¹ This was the first Congressional enactment providing for a land grant in aid of a railroad, but it was not utilized by the state. Other grants followed, until some 171,014,978 acres had been given by the United States and by the various states for railroad purposes. All this land was given on the condition that within a specified number of years railroads should be built between certain designated points. A portion of this land has been forfeited by non-performance of contract; but in most cases where the railroad declared itself unable to carry out its agreement, Congress good-naturedly extended the time. The greatest abuse of the grants, however, was the issuing of certificates before the road was built. In this way the company was able to hold its grant, and at the same time,

¹ "Public Domain," 1881, p. 261.

since in appearance at least the government owned the land, the company escaped taxation. The burden which they thus avoided naturally fell upon those who owned land in their own names. Meanwhile the railroad lands, though not cultivated, were increasing in value by reason of the growing population around them. They were sold to capitalists and others, who, purchasing thousands of acres at a time, in turn speculated upon them. Thus the final purchaser secured the land which he wished to cultivate at a price much higher than would have been asked by the government.

There was in the West at this time a political and business element which favored land speculation.¹ It dominated the legislatures of the states, and its influence was felt more or less strongly even in Congress. Even under the Homestead and Pre-emption laws, land easily passed into the hands of speculators. The only check was state taxation; for the owners of land could not allow it to remain idle if taxes were levied, and in cases where the amount of land was too large to be cultivated, the owners would have been compelled to sell it. But the small owners were just as eager as the great corporations to avoid taxation. So laws were passed forbidding the grant of patents until the surveyor's fee was paid; and until a patent was obtained the land was not taxable, although it could be occupied by the intended patentee.² What is now charged against the great corporations is really the result of improper legis-

¹ W. G. Moody, "Land and Labor in the United States," (1883,) p. 121.

² See Phillips, "Land, Labor, and Law," p. 341.

lation, and could have been avoided by a little legislative skill. It is true that taxes on the full value of farm lands would have rested heavily on the settler, but a proper reduction for debt would have made the whole system more satisfactory in the end. The railroads, on the other hand, mistook their own interests when they allowed land to remain unoccupied. Eventually settlements, farms, and towns along their routes would have repaid them in the increased business. As a matter of course, there has been no little chicanery about the land affairs of the nation; but the land office of the government has struggled hard to do justice and to protect settlers. Whatever of injustice exists will generally be found due to the failure of the citizen to attend to his part of the matter or in the failure of Congress to stop abuses by appropriate legislation.

None the less all these things aroused the opposition of the people when they began to see that they had made a mistake in their legislation and that speculators and land-grabbers had taken advantage of it. This opposition began in 1870, after the huge land grants to the various Pacific roads. It made "public opinion halt to give away to corporations a territory half as big as Europe." The people watched with indignation the course of the land companies into whose hands the greater part of the grants fell. The citizen of the United States, it was felt, was being cut off from his natural heritage. The doubt concerning early legislation was changed into the conviction that it was a mistake. It was during this time and a little later that for-

eign syndicates and noblemen purchased great tracts of land from the railroads. These lands were divided into great farms, used as cattle ranches, or sold in small sections to farmers. The foreign owners were always represented by managers, with whom alone the people came in contact. Misunderstandings often arose, and as a consequence, hatred for the foreigners. It was unpatriotic for foreigners to own land in this country; and this sentiment, coupled with the fear that a landed aristocracy would arise, added fuel to the opposition to great land holdings and the consequently unoccupied and undeveloped territory. This hatred of foreign land owners, however, has no real basis. It is a relic of mediæval civilization. Many serious and earnest men doubtless believe that it will virtually end in the nation's being transferred to the foreigner. But in reality the alien investor puts himself at our mercy. Compared with the resident owner, he is at a decided disadvantage in his business relations. Again, if he buys land or invests in some other form of property, he increases the value of the property around it. Considered from this point of view, the alien ownership in lands is not such a terrible thing, and hardly calls for the resolution of a political party against it.

For the last fifty years there has been more or less agitation in regard to the public lands. In 1852, the Free Soil party incorporated in its platform the declaration that, "The public lands of the United States belong to the people, and should not be sold to individuals nor granted to corporations, but should be held as a sacred

trust for the benefit of the people, and should be granted in limited quantities, free of cost to landless settlers." In 1892 the People's Party said at Omaha: "The land, including all natural resources of wealth, is the heritage of the people and should not be monopolized for speculative purposes, and all alien ownership of land should be prohibited. All lands now held by the railroads and other corporations in excess of their actual needs, and lands now owned by aliens, should be reclaimed by the government and held for actual settlers only." This later development of Free Soilism is much more radical than its predecessor of 1852, which was not a bad thing in its way, as it was partly the cause of the Homestead law.

This land movement is demanded not only for the oppressed of the cities, who are to have the alternative of leaving the cities and taking to the land, but also for the mortgage-laden farmers of the West, who, as it would appear, are crushed under financial burdens too great to be borne, under the present circumstances.

Governor St. John during the campaign of 1894 made the statement that the farmers of the country have been laboring under a mortgaged indebtedness of from seven to eight billions of dollars. No one could deny the statement and at the same time support his denial with proof; and it went unchallenged. It was a short step from this to the declaration that the entire West was staggering under the mortgages held by the moneyed East, and that the farmers were the victims of a conspiracy to wreck their homes and seize their farms under

the guise of law. These claims then entered into local politics, and their influence extended until several states were ruled by the party which had taken up the cry. Senators and Representatives were elected, through whom the matter of investigation was pressed upon Congress. While the party grew rapidly, at the same time the people of those states said to be most heavily embarrassed found it more and more difficult to borrow money from the East. This was brought about by the reaction from the statements made for political effect. Capital refused to believe the conditions to be any other than those thus pictured, and withdrew investments as much as possible. In this way an economic question was dragged into politics and there it remained, while its importance has been exaggerated by the need for political thunder. There is no doubt that the mortgage occupies an important place in the problems of the hour, but it is far from being a political question, nor can it be settled by the interference of any party.

A mortgage is not necessarily a disgrace or a sign of financial disturbance. On the contrary it may be the means of prosperity. It is only an evidence of a lack of capital on the part of one person, which has been supplied by another. The loan has been made and security given for its payment. Men and women go west for the purpose of bettering their condition. If they had money or were contented with their lot, such would not be the case. Having secured land either directly from the government or as cheaply as possible from some other owner, they proceed to cultivate it at once. Their

little stock of money is soon exhausted, and in order to make other improvements money must be borrowed, and the land is mortgaged. This case is repeated over and over again, until there are millions of dollars lent to the owners of Western farms. The money, however, is used for improvements. Churches, houses, towns, roads, drains, are constructed. Business enterprises have been set on foot and the new country has advanced rapidly. The mortgage money has not been squandered; the development of the West is a proof of the statement. It has been a great advantage to the settlers and to the capitalists, and only through such means could this development have been possible.

The serious effect of a general mortgage indebtedness lies in the tremendous force it brings to bear in times of financial depression and the constant drain on production.¹ It is in time of depression that the payment of interest is often defaulted. Payment at any time indicates that enough wealth has been produced by the cultivation of the land and other sources to pay the debt. But foreclosure means that the margin of value in the land has been swallowed up. Foreclosures, however, have been few in comparison with the number of mortgages, and this fact made Western mortgages a favorite investment with Eastern capitalists until a few years ago. Consequently more money was lent than could be profitably used and in many cases the farmer thus found himself in a hard place, barely able to meet the interest payments or compelled to foreclose. Foreclosure is a sure method of

¹ See *Political Science Quarterly*, 1890, p. 69.

lowering prices, for it means the disposal of property at much less than its value. It is then placed on the market at a much lower price than was asked before the foreclosure, and as a matter of fact decreases the value of all property in its neighborhood. In some cases heavy interest has been charged and people have been imposed upon by fraudulent agents. From these cases an outcry has arisen against Eastern capitalists, who, it was said, had lent their money at exorbitant rates of interest, taken mortgages, and were drawing from the state and impoverishing it. All these things have increased the cry that the entire West is mortgaged, and the inability to make ends meet is explained on the ground that the mortgage eats up the larger part of the product.

The late United States census does not corroborate this view of the question. In response to the demands of the West, the Census Bureau has made a careful investigation of the subject. Even if the figures have no positive value, their comparative value cannot be gainsaid. The entire mortgage indebtedness on June 1, 1890, was \$6,019,679,985, representing 4,777,698 mortgages.¹ The mortgages on acres amounted to \$2,209,148,431, and on lots \$3,810,531,554. The numbers of acres covered was 273,352,109. Of this mortgage indebtedness, New York had \$1,607,874,301, or 26.71 % of the total mortgage debts of the country.

Nevada's debt was \$2,194,995, which was less than that of any county in New York. During the ten years

¹Extra Census Bulletin, 71.

of the census, the increase in acres covered by mortgages was 65.36% ; in lots, 198.25%. The mortgage indebtedness on agricultural land increased 70.98% as compared with 216.80% on lots.

The increase of values in the states of California, Florida, Washington, Nebraska, and Kansas has been sufficient to pay the interest at the average rate on the mortgaged farm for the ten years, and in the end to pay the principal. There are fourteen states in which the rise in value has more than paid the interest.

Twenty states, however, experienced an increase in value not sufficient to meet the interest charges, while ten others suffered a loss in the average value of farms per acre. In these states the loss in value and the interest charges have pressed hard upon the people.¹ But six of these states belong to the North Atlantic, the other four to the Western division. On the whole the investigation has shown the mortgage indebtedness to be much less than was supposed and to be under more favorable conditions. That much reviled state, Kansas, is grouped among those which have been able to meet interest charges and pay at least part of the principal by the increase in valuation. The result of the investigation should be such as to restore confidence in those states where the conditions have presumably been so bad. In fact one would be led to conclude that the mortgages on the whole had exerted a beneficial influence.

¹ See an article by J. K. Upton, in *Harper's Weekly*, December 29, 1894.

IV.

FINANCIAL VIEWS.

FINANCE.

We demand a national currency, safe, sound, and flexible, issued by the general government only, a full legal tender for all debts, public and private, and that without the use of banking corporations, a just, equitable, and efficient means of distribution direct to the people at a tax not to exceed two per cent. per annum, to be provided as set forth in the sub-treasury plan of the Farmers' Alliance, or a better system; also by payments in discharge of its obligations for public improvements.

We demand free and unlimited coinage of silver and gold at the present legal ratio of 16 to 1.

We demand that the amount of circulating medium be speedily increased to not less than \$50 per capita.

We demand a graduated income tax.

We believe that the money of the country should be kept, as much as possible, in the hands of the people, and hence we demand that all state and national revenues shall be limited to the necessary expenses of the government, economically and honestly administered.—*Omaha Platform.*

The most important planks of the Omaha platform are those which relate to money. This importance is shown by the care and thought with which they are set forth, by the fact that the late campaigns have been fought with this currency issue as the prominent one, and because the main support of the party comes from states which are interested in silver; although it has been found that this support was not due entirely to the silver tendency of the party, but partly at least to other planks which are more socialistic in character. In addition to this is the attitude of the leaders of the party

toward the money question in comparison with the remainder of the platform. They believe in a financial campaign, leaving the rest of the platform to be taken up at some future time. These facts, coupled with the position of money in the economy of all governments and its effect upon the people, cause us to turn with great interest to this part of the subject.

Looked at from the standpoint of purpose, the financial views of this party can be divided thus :

(a). Incidental schemes.

1. Postal banks.
2. Income tax.
3. Government income.
4. Relation to industries.

(b). The expansion of the currency.

1. Free coinage of silver.
2. Increase of currency to at least \$50 per capita.

(c). Modes of distribution.

1. Not by banks.
2. Sub-treasury.
3. Or a better system.

The first section (a) concerns us little, since the objects contained in it are not essentially Populistic, neither are they necessary to any particular system of currency. The income tax was passed by a Democratic Congress ; and the matter of postal banks does not concern us very much. In reality these are minor details which do not change the position of the party. But the second (b) and third (c) are of the utmost importance.

The claims and demands of the party are to be found in the platform and in the bills which have been presented by its representatives in Congress. The platform demands free coinage of silver at the ratio of 16 to 1, and the increase of the currency to at least \$50 per capita. These two planks can be regarded as requests for an inflation or perhaps, in juster terms, an expansion of the circulation. The bills introduced in the Senate by Senator Peffer are similar to those offered by his colleagues, and are to be interpreted as evidence of the intention of the party, should it gain power enough to bring about such legislation.¹ These bills, twelve in number, would increase the monetary circulation of the United States to an amount ten and a-half times as great as that of the currency now in use by all the nations of the world. They call for a circulation of \$95,-150,000,000. The platform is conservative beside them, but the two must be taken in connection with each other,—the platform as the cause, the bills as the effect. The planks which refer to the mode of distribution of the currency have been passed over by the party; more stress being laid on the free coinage of silver and the increase of the circulation. In fact the entire energy of the party seems to be bent toward financial reform.

When the new party determined upon the abolition of the national banks it was necessary to offer some substitute by which the currency of the country might be circulated. The wording of the platform in regard to this point reads as follows: "We demand a national

¹ See Appendix D.

currency, safe, sound, and flexible, issued by the general government only, a full legal tender for all debts, public and private, and that without the use of banking corporations, a just, equitable, and efficient means of distribution direct to the people at a tax not to exceed 2 per cent. per annum, to be provided for as set forth in the sub-treasury plan of the Farmers' Alliance, or a better system; also by payments in discharge of its obligations for public improvements." Under the plan of the Farmers' Alliance, the issuing of money comes under one of two alternatives,—“either the government must permit the individual citizen to issue scrip based in some manner upon his own labor products, or the government must itself supply him with money notes at cost, as it now furnishes them to banks.”¹ The first is acknowledged to be a worse than useless form of money, for it would not circulate beyond the immediate neighborhood of the issuer and would not meet the exactions upon it. The only way left, then, is for the government to furnish currency directly to the people; the cost of printing, issuing, and other expenses to be borne by the one first receiving the money. In return he must give ample security and must promise to pay the loan in a reasonable time. The government burns the scrip when it is returned. The security acceptable to the government is to be, if it is so desired, non-perishable farm products, real estate, and manufactures. The borrower is to receive in notes 80 per cent. of the value of the product deposited. These he may use as he

¹ See *Arena*, Vol. V, 347.

wishes. When the value of the security decreases, the borrower must increase his security or give up the loan. In this way the government is to be made secure and can endorse the notes with safety. Such is the sub-treasury plan. It will naturally necessitate a greater number of warehouses, clerks, and complicated accounts than was at first assumed. The whole plan is based upon the hypothesis that farm products are a safe basis for loans, and upon the old ideas of a cheap currency, the need of the people for money, and the inelasticity of the prevailing system.

The sub-treasury plan is neither more nor less than the application of the national bank system to the individual. That is, the individual is to be allowed the privilege of the banks to make a deposit and to receive in return a certain amount of money based on the value of the security. In principle the sub-treasury plan is much like the so-called "Land Bank" in Massachusetts in 1714. There is, however, considerable difference as regards the details. The sub-treasury scheme is broader in its allowance of securities and the borrower pays a much lower interest. The "Land Bank" was periodical: the issues were made for a period of years; while the later plan proposes continuous issues at all times and in any amount. In this way the money system is not disturbed and the fluctuation caused by the redemption of all notes at one time is, at least to some degree, avoided. The mistakes of the Massachusetts "Land Bank"¹ are to

¹Hutchinson's "History of Massachusetts's Bay Colony", Vol. II., p. 393. Ed. 1768.

be avoided by this continuous currency at a low rate of interest, but the basis of the plan is not a stable one. At times real estate fluctuates greatly; the same is true of corn and the various products of the farm. This is met by the provisions for additional security or the redemption of the loan. The whole theory is fairly plausible, but the cumbrous machinery required to make it practicable would in time destroy its usefulness. Then again, the plan extends only to farm products and to real estate as securities. The natural consequence would be a boom in these two things, since those desiring loans would have to possess one or the other to give as securities; and at the present time it would be almost as difficult to obtain them as to get money. The government would be compelled to have warehouses in which to store its farm securities, and an army of expert clerks to keep accounts of the various transactions. But more objectionable than all this would be the ease with which this currency could be controlled by the capitalist. Farm products would be bought up by the capitalist, dumped in the warehouses, and a loan of astonishing size would then be secured. Moreover, there would be every incentive for the capitalist to do this, since he would be able to get money at 2% instead of at 4% or 5% as he now does. Any plan now advanced by the People's Party will probably be one which involves the same principle, that is, of cheap money, unlimited in amount, and issued on land and other securities. But paper currency cannot be issued against land, for land has no adaptability as money. Nor can mortgages¹ on

¹ Brough's "Natural Law of Money", pp. 64-65.

real estate, government, state or railroad bonds, perform the same service. Paper currency is but a "promise to pay on demand," and the thing in which it is payable must have the qualifications of money. Consequently if the borrower fails to meet his note, the government takes the security which the note holder does not want. He demands gold or silver; but this the government does not possess for the purpose. Thus gold and silver coinage manifestly fails to fulfill its proper function in a money system.

The demand for more money per capita has usually come from the South and West, where the conditions were such as to cause a scarcity of money. A new country always needs capital. It is the comparatively poor who emigrate, and they require everything, from ploughs and machinery to household furniture. The consequence is that the capital which goes into money is begrudged more than anything else. They do not want to hold anything in the form of money, but spend it for tools and necessities brought from the older parts of the country; thus the cash goes out of that section, and when they are ready to sell their products, they find that they must wait for the money to return. Meanwhile prices are apt to decrease, and thus the whole system works to their disadvantage. Realizing that such is the case, a cheap money is demanded, sufficient in amount for all practical purposes. Any plan tending to secure such a result is at once joyfully accepted by a large number of people. Most urgent in their demands are those who have nothing to lose and everything to gain. In 1728, persons of large obligations and decayed for-

tunes found that the greater the depreciation of the currency the more easily debts were discharged. Men of this class, having a personal and selfish object in view, were more persevering than those who opposed them on public grounds.¹ The people of 1896 have made the same discovery. Money is in all these cases confounded with capital: an ample and cheap currency will mean capital easily secured,—this is their hope. Depreciation sets in, however, because the money has no substantial base and is too freely issued. There is a flow of wealth from the creditor to the debtor. The latter pays his bills in a constantly decreasing money value, and thus property passes from the industrious to the speculator and gambler. The larger the debt the greater the gain. Under these circumstances the more a man owes for value received, the better off he is.² The capitalist suspends active operations, stops the plants in which he is interested, while those who live on salaries and annuities find themselves in want and despair. But the laboring man suffers more than others. His expenditures have not been regulated by the rise in prices, and he consequently finds himself in a distressed condition. Then comes the reduction of redundant currency. Property shrinks in proportion to the old prices; goods bought must be sold at a sacrifice. Prices go down; confidence is destroyed, and a financial crisis crowns the inflation. Such has been the experience of the past; such will be that of the future, if we resort to such expedient as the sub-treasury plan, or to a currency like the one proposed by the new party.

¹ See "Summary History of North America," Vol. I, p. 310.

² Bronson's "Connecticut Currency."

V.

GOVERNMENT OWNERSHIP OF RAILROADS.

Transportation being a means of exchange and a public necessity, the Government should own and operate the railroads in the interest of the people.

The telegraph and telephone like the postoffice system, being a necessity for the transmission of news, should be owned and operated by the Government in the interest of the people.--*Omaha Platform.*

The rapid growth of the railroad immediately after the war, and the Granger agitation and legislation of the seventies, brought railroad matters and the question of their ownership by the government before the people with much force. Since then this question has grown in importance; the working-men have taken it up and a party has made it the subject of one of its platform planks. There is a quietness about all this movement (agitation if you wish to call it such) which is apt to give the casual observer the impression that it is not deeply rooted. But the indications are that should the matter come to a vote, the question would be decided in favor of government ownership of the railroads. Popular opinion regardless of party is liable to break out at any time and secure the measure desired. The reason that it has not yet reached this stage probably lies in the multiplicity of problems before the public, which need solution far more than does the railroad question. In this agitation the People's Party as a whole occupies an extreme position. It not only hopes for the cessation of abuses, but for material aid in the way of low rates and

reduction of taxes, brought about by the government's use of railroad earnings.

To a very great extent this party has taken advantage of the demand for government ownership of railroads, in order to secure support where perhaps it might otherwise fail to find it. In the West there has always existed more or less hatred of the railroad, and any movement to change the ownership would be sure to secure much support.

The popular feeling in favor of government ownership is largely due to the newspapers and periodicals. Despite their unreliability they are believed, and must be considered in connection with the causes of the Populist movement. Probably the earliest demand for government ownership was on the ground of extortion. The idea soon prevailed that a railroad was an instrument by which certain Eastern capitalists were to be enriched by the plunder of those unfortunate enough to be obliged to use their road. This view has been deeply rooted in the minds of the early settlers, who were perhaps justified in its assumption. The feeling of injury has been increased by the tales of watered stocks and land deals,—containing a great deal of truth, but much magnified for political purposes.

As a complement to the sweeping charges of extortion, comes the dream of low rates and large savings when the government shall own the railroads. A great many writers on railroad topics insist that the economy of the government management over that of private management would be very great. The annual saving by such

operation is estimated from \$110,000,000 to \$160,000,000.¹ One writer more enthusiastic than the others, in a pamphlet for sale by the national committee of the People's Party, believes that government ownership will result in low passenger rates, and free freight rates. "This possibility," he says, "is due to the fact that the amounts which have been taken from the people will be honestly used."² Such a view is rather an extreme one; but there is no doubt that the advocates of government ownership hope for a liberal revenue from the railroads after they have come into the control of the government. This revenue is to pay for the roads, and reduce taxes in an astounding way.

¹ See Appendix H.

² See the pamphlet, "Government Ownership," by L. A. Stockwell, Indianapolis, pp. 47-48. "The distance from Chicago to New York is 980 miles. It would not cost four times as much to build a four-tracked road, but we will call it four times as much in order to offset the increased cost of so many trains a day. At \$25,000 a mile, the four-tracked road would cost \$98,000,000. Now the cost of running it a year would be as follows:

Interest on investment at 3%	\$ 2,940,000
Wear and tear at 10% on track and rolling stock	9,800,000
Wages of ten men to the mile @ \$2 a day	7,034,000

Total expenses	\$19,774,000
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"By running a passenger train of ten coaches every hour each way, the road would haul 10,512,000 passengers a year. At \$2.50 each, this would amount to \$26,280,000, or \$6,506,000 more than enough to pay all expenses, except for official salaries and coal and oil. After paying liberal salaries and for fuel and oil, there would still be \$3,000,000 left to pension the widows, orphans, and cripples. Not only this, the above amount derived from passenger traffic at a little over one-fourth of a cent a mile, pays 3% interest on the investment and all expenses, so that freight of all kinds can be hauled absolutely free of cost. I know this will seem too good to be true. To such a degree have the people been robbed by the roads that these figures will seem visionary and impossible.'"

The real point in all agitation of this sort is not as to whether it is a good thing for the country, but whether it will secure a majority for the party. If the latter will not result, we may look for the disappearance of this plank from the platform. Although government ownership appears in the platform of the People's Party as essential to its creed, nevertheless it is not accepted by all the members of the party. While there is a large majority who firmly believe in the ownership of the railroads by the government, the more conservative and abler men of the party, on the other hand, are much in doubt as to the practical outcome of the experiment. Senator Allen, of Nebraska, one of its strongest men, in an interview published in the *Review of Reviews*, expressed the belief that the best way to bring the matter before the public would be to take one of the Pacific roads and try the experiment. He added, however, that he was in doubt as to the success such an undertaking.¹

Firm as the opinion seems to be on this point, there is and has been a faction which has insisted all along that there was another matter far more important than the railroad question to be dealt with,—the currency question. The party started out with a variety of economic questions, on about the same basis, but one by one they fell to their natural places until this one stands out more prominently than the rest. Replying to its contemporaries concerning the action of the Populist national committee in allowing silver to forge ahead of government railroads

¹ The *Review of Reviews*, July, 1894.

and related questions, one of the Populist papers says in an editorial: "Those who fear a one plank platform would do well to look over the present and immediate past. They would learn that the contest for the past two years has been waged on the single plank of financial reform. . . . Whether wanted or not, whether urged by special resolution or not, whether deprecated or not, the single plank of financial reform, with free coinage of silver as its leading feature, will be the overshadowing and dominant factor in the People's Party contention until that proposition is satisfactorily settled. We believe in accepting the situation and shall continue to do battle for financial reform in preference to all other demands of the party."¹

From this and other utterances, one is led to believe that the question of railroads is not at present so important to the People's Party as the platform would lead one to believe. The currency contest is likely to be long and bitter, and perhaps in the end satisfactory to no one. The Populists have been forced to pay more attention to one issue than another by the conditions prevailing at Washington and throughout the country; and they have been by no means slow to use their balance of power to force attention to their silver views. Silver being an issue unlike the other features of the platform, they have concentrated their forces on the one plank of financial reform and allowed the others to remain in the background.

¹ *The National Watchman*, January 11, 1895.

VI.

IS THE PEOPLE'S PARTY SOCIALISTIC ?

From reading the accounts of the various Populist conventions, and the speeches of prominent men in the new party, it has been very difficult to determine whether or not the party is socialistic. The action of the conventions indicated one thing, the speeches another. It is true that the Omaha platform was in existence; and yet the continued references to other issues than those raised in that political manifesto gave the impression that the planks were not so universally accepted as had been supposed, and that the whole party was drifting away from them. Such was the belief entertained by the general public; while behind the scenes a battle was being carried on between the silver and socialist elements in the party itself,—a one plank platform versus the Omaha platform. The radicals wished to sustain the latter, while the conservatives desired the party to drop all issues except that of silver and fight only for financial reform. These two elements were at swords' points over the apparent insignificance of silver in the Omaha platform. The radicals were conservative silver men, while the conservatives were radical silverites. The silver men had entered the party more for the purpose of booming silver than to mitigate the wrongs of the oppressed. The Congress of the United States had passed the Sherman Act and later had re-

pealed it, so that the silver men could hardly expect any support from the old parties. They saw a way out through the new party ; but they had not taken into account the real causes of that party's existence, and consequently failed to secure any great advantage for silver. Meantime both Republicans and Democrats have turned like needles to a loadstone in the direction of silver, and the silver men have hurried from the different parties, including the People's, to the neutral grounds where the advocates of this coinage seem universally to be gathering.

This contest has been waged from the very beginning of the party. It began in debates and ended in a party rupture ; for the long expected crisis has now occurred and the true Populistic element has broken away from the silverites, and stands firmly on the Omaha platform.

The leaders of the party favored the silver side of the fight, but the rank and file of Populism was not to be beguiled by any such sentiment. The silver men attempted to undermine the platform, but without success. Every time the question was brought up a contest ensued, in which the silver men were driven to the wall. In the conference of the Populist leaders at St. Louis in December, 1894, a desperate attempt was made to change the Omaha platform, but the great majority of delegates at the conference voted to re-affirm it. Since that time, the one-plank silverites have tried to get control of the conventions in Chicago and Cleveland, held for the purpose of nominating city officers. Chicago and Cleveland are strongly Populistic, hence

the battles in these two cities were significant of the strength of the two factions in the general party. In Cleveland there was no evidence of any silver element, while in Chicago the silver champions were forced to remain silent. The same experience has been repeated in the state conventions, and even in the silver states the leaders of this movement were not able to control the Populist party.¹ The presence of the silver faction has obscured the real purpose of the party to such an extent as to render the question at the head of this chapter a pertinent one. But the defection of this element leaves the originators of the party without the screen of free coinage. The two tendencies have been pointed out and the student of this party movement can discern the motives without the perplexing presence of cross-purposes.

The government has very materially aided the development of the West. Large sums of money were there spent, and large tracts of land were given away to encourage immigration. The Pacific railroads received both money and land from the government, and states were given thousands of acres for educational purposes. The national government has also built roads, and aided in the construction of canals. In addition to all this the Homestead and Pre-emption laws opened large tracts of land which were to be had in small lots for the asking. The legislatures of the various western states have been very ready to help this or that undertaking, in order to advance the states. All this led to an exag-

¹ See *New York Sun*, March 4, 1895.

gerated conception of the power of government to accomplish large results in bringing about prosperity. The government's policy has made some men rich, and has also accustomed the people to look toward Washington whenever they were hard pressed or wanted legislation to assist some contemplated enterprise. This reliance upon Washington has passed through various stages, until now it manifests itself in the demand that the government shall own and control the railroads. It is not to be understood that the idea of paternalism in government has of itself developed to the point of socialism; but the principles of government extension, public ownership and management, have fallen upon ground well prepared for them. The consequence has been a rapid growth of these principles, and a general belief in them.¹

As a result the people of the West are divided into three classes, separated only by their distance from the first, which forms the nucleus of the People's Party. In reality this first class is composed of socialists: the majority would probably admit that they were such. In the second class are to be found many farmers, laborers, business and professional men, who are not Populists, but who favor government ownership of railroads and telegraphs and an extension of government activity. This class fear the word "socialist" and in their hearts regard the socialist as a species of bomb-thrower who is at war with society. Hence they cannot see the similarity between their own belief and that of the socialist. The third class consists of men who repudiate socialism

¹ See "Socialism in the West," *The Forum*, Vol. 15, p. 332.

even more plainly than the second, but who are nevertheless declared paternalists.

Such, in the main, is the situation in the West. As a matter of course there are many exceptions, but the large majority of the people belong to one or the other of the classes mentioned. Under such conditions the Populists have naturally received much sympathy, and the very fact that they have had sympathizers has encouraged them to express their views much more forcibly than they would otherwise have done. This fact has also given them sufficient force to hold out against the strategies of the silver men, and by the exhibition of their power to add strength to strength.

Strong as has been the spirit of paternalism in shaping the beliefs and opinions of the West, there has been at work another force, perhaps even more potent and active—that of railroad oppression. The Pacific railroads from the first watered their stocks. The earnings at ordinary rates were insufficient to warrant dividends on the increased capitalization. In order to pay these, an enormous income was necessary, and the only way to obtain this was to impose heavier charges on freight and for many years this practice was maintained. Although the rates were reduced later, the extortion practiced has caused a hatred of railroads and other corporations. Protests arose from all sides, and the Farmers' Alliance with other similar organizations, shaped the movement until the meeting at Cincinnati in 1891 brought the People's Party into existence. Although there were other material causes of the movement, it

was the sentiment of the Western representatives which shaped the platform in regard to railroads and telegraphs, and from this section came much of the socialism introduced into the platform.

The question naturally arises, why do the socialist papers hurl all kinds of invectives at the new organization and, if it is really socialistic, refuse to consider it worthy to be classed with socialistic parties? A quotation from *The People*, the leading journalistic exponent of that belief in the United States, may cast some light on the question. "The plan of the silverites to make the People's Party more reactionary than it was, has been substantially carried out." So long as the silver element in the party was not predominant, the socialists had no objections to the platform of the Omaha convention; but when financial questions began to overshadow the other planks, then the cry of "We told you so" was raised, and the People's Party was declared to have betrayed the principles set forth in its platform. The *National Watchman* said soon after: "The time for Populism and Socialism to part has come, and those who fail to realize the situation will have, in the future, ample time to reflect upon their error in judgment. What we want now is a clear cut, aggressive, intelligent propaganda upon financial reform."¹ Even this conservative Populist paper recognized the fact that there is such a thing as socialism in the party. The parting did come at Omaha, but not as then hoped by the writer of the editorial.

¹ *National Watchman*, February 22, 1895. See Appendix G.

The silver and financial reform advocates instead of the adherents of the entire platform were forced to retire.

The Omaha platform of the People's Party is a remarkable document in many ways, and one of its peculiarities is the ambiguity encountered at every turn. Its whole tone is socialistic. Yet if the charge of socialism were brought against it, the defender of the platform could at once deny the assertion, and define the section attacked in such a way as to refute the statement. This ambiguity is due to the two opinions prevailing in the convention which framed the platform, and to the endeavor to satisfy both. There was, on the one hand, the real element of the party itself and, on the other, the silver advocates who had been drawn to the new party in the hope of advancing their cause. It was for the purpose of appeasing the more conservative element that the platform was softened in places and the utterances on certain subjects made less positive. But despite the ambiguity of the platform as a whole, there are to be found certain positive declarations of principles which may be compared with the purposes of the socialist. By this means the real similarity of the two views, if there be any, will appear.

SOCIALIST. ¹	PEOPLE'S PARTY. ¹
<ol style="list-style-type: none"> 1. Abolition of inheritance in land or other means of production, such as machinery, railroads, telegraphs, and canals. 2. Abolition of private property in land or any other means of the production of wealth. 3. Abolition of wages system. 4. Abolition of competitive system. 5. National ownership of land. 6. National ownership of railroads and telegraphs. 7. A graded income tax. 8. A paper currency or fiat money. 9. Abolition of National Banks. 10. The public lands to be declared inalienable. Revocation of all land grants to corporations or individuals, the conditions of which have not been complied with. 11. Establishment of postal deposit and savings banks. 12. Adoption of constitutional amendment requiring the election of President and Vice-President by the direct vote of the people. Also providing for election of the United States Senators by direct vote of the people. 13. Rigid enforcement of eight hour law in all public departments. 14. Adoption of the initiative and of the referendum. 	<p>"The land, including all the natural sources of wealth, is the heritage of the people and should not be monopolized for speculative purposes."</p> <p>National ownership of telegraphs and railroads.</p> <p>A graded income tax.</p> <p>A paper currency or fiat money.</p> <p>Abolition of National Banks.</p> <p>"Alien ownership of land should be prohibited. All lands now held by railroads and other corporations in excess of their actual needs should be reclaimed by the government and held for actual settlers only."</p> <p>"We demand that postal savings banks be established by the government for the safe deposit of the earnings of the people and to facilitate exchange."</p> <p>"That we favor a constitutional provision limiting the office of President and Vice-President to one term and providing for the election of the Senators by a direct vote of the people."</p> <p>"That we demand a rigid enforcement of the existing eight hour law on government work, and ask that a penalty clause be added to the said law."</p> <p>"That we commend to the thoughtful consideration of the people and the reform press the legislative system known as the initiative and referendum."</p>

¹10 in platform of Socialist Labor Party of the United States. 11, 12, 13, 14 in platform of Central Labor Union of Cleveland, Ohio. 1-9 given in Cook's "Socialism and Universal Suffrage," p. 19.

The fourteen demands of socialism have been selected with care and with the desire to secure a representative list of the various principles and tenets set forth by them. They are taken from the planks of the various socialistic parties and truly reflect the opinions of socialism. In comparing the planks of the People's Party

platform, we find that nine of them correspond closely to those of the socialists. Such a similarity is not an accident, but the result of thought along the same lines. The People's Party could not have adopted a platform in so many ways akin to that of the socialists if there had not been a previous tendency in that direction. It is true that the great fundamental principles of common ownership and equality of income are not expressed, nor is the last even hinted; yet the national ownership of the railroad and telegraph, coupled with a demand for increased State action, can only characterize the platform as socialistic in its tendency.

VII.

ECONOMIC EFFECTS OF POPULISM.—PRESENT AND FUTURE STATUS OF THE PARTY.

The evidence concerning the tenets of the new party, the causes of its early growth, the development of the scattered organizations into a national party, and the economic effects of the Populist policy in those states which have been ruled by the People's Party have been considered, and we are now ready to apply the fundamental principles of party, and to determine what is the tendency of the People's Party and what are its chances for a continued existence.

It is almost an axiom that there can be only two great parties in a nation, an axiom which expresses the fundamental fact that all problems of great importance ultimately lead to the one question, Is it now expedient? On such an issue there is no possibility of having more than two sides. The consequence is that there can be only two great parties in a nation, differing because of the principles upon which they are founded. The question naturally arises therefore, Can the People's Party become one of the two great national parties? A party, in order to be great, must possess the confidence of the people, present the issues most important for the welfare of the State, and must be a party of principle. This principle must be closely defined and must run through all of the party's own acts and legislation. It must be shown in

relation to constitutional, economic, and political measures. The constitutional view must always be kept in mind when considering economic or political measures, and economic and political principles must likewise be held in view when constitutional questions are considered. These principles interact, and are so closely related to one another that a party in order to be great is compelled to formulate some kind of a statement in regard to each of them. In other words, the party standpoint on constitutional, economic, and political measures must be clearly apprehended.

In direct opposition to this kind of a party is another, whose principles in regard to the three sides of government are only vaguely apprehended ; such a party has been designated as one of feeling. The foundation of such a party is generally discontent, and the movement which brings it into existence is aimed at the remedying of those things which have induced that discontent. When this is accomplished, the object of the party's existence has ceased. Such a party seldom formulates any underlying principle of action. Its attitude toward constitutional, economic, or political measures is never consistent, and hence it is only a question of time before dissatisfied forces break it up. The chances are that such a party can never become a great one, because of the difficulty of framing principles of sufficient stability to stand the buffeting of opposition. But if it does formulate principles, it may, by securing an affirmative or negative side of a question of vital importance, spring into prominence as a great party. The People's Party

has nearly secured such a position in relation to the money question. But it has made no move toward formulating a definite set of principles in regard to the three sides of government activity. Hence comes the question, what will those principles be? But before attempting to show this, it will be well to consider the present status of the party a little more closely.

Up to the present time, the People's Party has accomplished very little. It is changeable, as has been seen, while all indications point to a transient existence. It is not a party of principle. The demands which it presents in the platform are measures, not principles. They are the result of discontent and are aimed at the destruction of the causes of that discontent. The platforms do not put forth any great principle concerning the constitution. There is no statement as to what should be the policy in great questions of state. Every plank of any importance is an economic one and considers economic questions only. In fact, the whole movement might be designated as a protest against the present economic system. In the place of existing political economy whose principles of money and attitude toward corporations are wrong, is to be substituted a new system. The platform contains about all the "issues" that have been going up and down the world for a century. There are many commendable things in it, such as sympathy for the workingman, the demand for a free ballot, a fair count, and the adoption of the Australian ballot system. But these are things that are usually included in any platform. The other statements jar upon the

conservative and thinking people, and make the advance of the party among the more solid interests of the country almost impossible. This has been recognized by the leaders of the party, and the endeavor now is to drop the socialistic ideas in the platform, and work upon the one plank of money reform without arousing the wrath of the real Populistic element.

The People's Party is therefore in a transient state. It is in a place where it will either be absorbed by the new Silver Party, or will change its platform in such a way as to make silver the predominant factor in its contention. If this is not done, the silver element in the party will go over to the bimetallic party, and leave the remnants to carry on a hopeless battle under the Omaha platform. Then will follow a combination of the Socialistic and People's Parties. The success of the party since its formation in 1891 has been almost phenomenal; but that success does not, under existing circumstances, point to any probable future success. A comparison of the votes cast in the elections of 1888, 1892, and 1894, indicates a large gain for the Populists.¹ The vote of 1894 amounts to an increase of 430,562 over that of 1892, or a gain of 42%.

But this is a deceptive indication of the strength of the party, owing to the factions of which it is composed. The votes cast for Mr. Weaver in 1892, and in the various congressional and gubernatorial elections of 1894, were those of men dissatisfied with the conditions, and who turned to the new party in the hope of obtaining some

¹See Appendices B and C.

relief from the evils which they thought to exist. The party has really accomplished nothing in the four years, and in some states has made matters worse; so that the probable result will be the transfer of a part of the votes cast in 1892 to another party in 1896. The hold of Populism upon the farming class of the West is by no means a strong one. The farmer has not come to final conclusions in regard to the change in the banking system, control of monopolies, and the establishment of standards. While in this condition, the People's Party through its numerous and pleasing doctrines has won those least settled. At the same time there seemed to be an opportunity for greater activity, and the expectation of accomplishing something through the new movement rather than by means of the old conservative parties. Eager as have been many in the East to consider the people of the West desirous of freeing themselves from their debts, nevertheless such is not the case. They recognize that the present monetary standard is in some respects wrong, and some of them, more easily influenced by a new scheme, have endorsed the money plans of the People's Party. It was not done, however, to escape payment of debts, but rather, as they thought, to avoid paying more than they owe. When the fallacies of the new movement are recognized, as is sure to be the result sooner or later, the support will cease.

It is with such an understanding of the movement that we turn again to the two questions asked above, namely, (1) Will the People's Party become a great party? and if so, (2) What will its principles be? The logical outcome of the whole discussion is embodied in

these two questions. They cannot be answered by any positive statements; for the future action of the party has everything to do, even with its continued existence as a minor party. Whether the People's Party shall be a great party or not depends upon the formation of principles which shall be fundamental in all respects. And moreover, if these principles are not logical and correct, the possibility of becoming a great party is still further limited. To-day the world is drifting toward socialism, or at least the tendency is toward a wider application of government activity. There is, in consequence, a demand for a broad, liberal socialist party. The underlying tendency in the Populist movement is in the same direction. The one hope, then, of better things for itself in the future lies in its casting aside half way measures and following the logic of its underlying tendencies, boldly announcing itself as the socialist party in America, confessing paternalism as its principle of constitutional interpretation, the socialization of industry as its economic one, and the ignoring of politics as its political program. Thus may it become a party of principle, and possess all the elements of a great one; but it must rest with the future to say whether such a party, however great, can be right.

VIII.

RESUMÉ.

Whatever may be said concerning the People's Party, there can be no question as to the honesty of the rank and file. In the use of the word honesty in this connection, the existence of the intrigues and schemes that go to make up much of our political life is fully recognized. But the mass of the new party is in earnest. The movement is an honest attempt to meet the questions which seem to be of greatest importance to the welfare of the nation. In fact, the party as a whole has serious doubts as to the ability of the nation to survive unless these questions are settled. The members of the organization see much in the condition of the people which justifies this fear. As farmers they have felt the burden of increasing debt and declining prices. Constant appeals to the older parties have failed to secure any relief or recognition and they have in consequence organized to help themselves. Such, briefly stated, are the causes for the formation of this party.

In direct contrast with the honesty of the intentions is the absurdity of many of the measures proposed for the relief of those suffering from present legislative and industrial ills. Nothing else could be expected. Men who are not accustomed to deal with affairs of commerce, industry or transportation cannot hope successfully to make laws for their management. To a very

large extent the party is composed of farmers and laborers. They have proposed such measures as seemed, from their limited experience, best suited to remedy existing evils. The lack of men possessing wide experience and knowledge has made it impossible to treat the questions as they should have been treated. In too many cases personal prejudice, mistaken for unbiased opinion, has entered into the declarations of the party and vitiated to a large degree its influence with those outside the organization.

This is seen more especially in the financial position where the attempt has been made to lift the burden of debt from individuals. There is no inclination or purpose to do injustice to creditors, but rather a desire to bring about an adjustment of conditions so that the one-sidedness of the present industrial arrangement may be corrected. The government is regarded as the fitting agent for such an attempt. Hence the views of the party lead it to the fiat theory of money. The principles which govern the demands for financial legislation are based on the following suppositions: (1) That money is the creature of the law; (2) That a government should issue all the money a people may demand; (3) That the decree of a government creates value; (4) That the real value of a coin depends upon its face value backed by the fiat of the government. The party also advocates a sub-treasury scheme by which farmers and others might secure loans by depositing farm products with the government. This plan, however, has been recognized as impracticable and is no longer urged as essential.

In the matter of farms and mortgages the attitude of the party is toward land nationalization. The belief seems to be common that under the present system the small farmer must inevitably disappear. But this view is far too pessimistic when the statistics of 1890 are taken into consideration. The party believes in non-alien ownership of lands and the return to the government of lands now in the possession of railroad companies, but not used for the actual operation of the roads. The lands thus secured are to be parcelled out to the people. Such a division would of course tend to increase the amount of farm products and in the end lower prices—the very thing the party is contending against.

A third matter that has been given a good deal of consideration is the question of government ownership of railroads. The railroad represents to the party altogether too much power. Its manipulation of legislatures and town councils is considered dangerous. In calling the attention of the public to this fact in no uncertain terms, the party has done a good service. But it has failed to demonstrate the feasibility of government ownership, still more to give us any definite plan by which the reform can be accomplished. The platform indicates a firm belief in the possibility of transferring the best in private management to the management by the government. But in this view of the situation the failure of other countries to bring about such a result is disregarded. Between private and government ownership is another stage, that of government regulation. This wisely applied is certainly a better solution of the

railroad question than any other means now offered. The party, however, regards it as impossible to hold the railroad in check and looks therefore for relief only in government ownership.

On such questions as railroads, finance, and land there is no difficulty in ascertaining the position of the party. Regarding the tariff the platform contains no definite statement. The tendency of the party has been to consider carefully the political influence of the questions brought before it. This is particularly true of the tariff which has long been the bone of contention between the older parties. Hence the attempt to avoid any unnecessary discussion of a measure which might be liable to alienate votes. Perhaps the silence of the party on this point is somewhat justified in that it considers the tariff as a question of the past. Other questions like the eight hour day, liberal pensions, anti-contract labor laws, referendum, and civil service reform have also received the attention of the party. In these as in the tariff the political effect has been weighed. Although the eight hour day is naturally opposed by the farmer, still it is supported by the party. Liberal pensions are a concession to the soldier vote, anti-contract labor laws to the labor element and the referendum and civil service reform to the political reformers. But it can hardly be said that the party has tried to use its position in regard to these questions for the purpose of drawing votes to any greater degree than is customary with other political organizations.

Taken all in all, the People's Party has not added any-

thing but variety to our political life. In some minor matters already pointed out the party is progressive and reasonable, but in the great questions such as finance the reforms proposed are woefully inadequate. In a way a real service has been done in bringing about a public discussion of the currency situation, though the party itself has not helped in the solution, but retarded it. At the same time sectional strife between the East and the West has been increased by its existence. It is not likely that it will make any great headway, because of its lack of fundamental principles. The entire movement is the result of discontent. Party organization of lasting qualities must be based upon more than discontent. We may therefore regard the existence of this party as a transient one.

June 1, 1896.

APPENDICES.

- A. Table of Agricultural Organizations.
- B. Growth of People's Party.
- C. Comparative Strength of Parties in the Legislatures.
- D. Bills Introduced in the Senate by Senator Pepper.
- E. Editorial from *National Watchman*.
- F. C. Wood Davis' Estimate of Savings by the Government Ownership of Railroads.
- G. Populist Manifesto.

APPENDIX A.

	ORGANIZATIONS.	Date.	Members.	States or Sections	REMARKS.
1	Patrons of Industry .	1867	150,000-1891	Throughout the Union.	800,000 members in 1874.
2	Agricultural Wheel .	1882	500,000-1887	In Miss. Valley, including Texas and Alabama.	
3	Farmers' National Alliance	1880	400,000-1889	N. Y., Neb., Dak., Minn., Mo., Ill., Iowa, greatest strength.	The membership given here is an estimate by Senator Pepper.
4	Farmers' Mut. Benefit Association . . .	1887	150,000-1890	South and West. Strongest in Nebraska.	
5	Southern Alliance, (known sometimes as Nat. Farmers' Alliance and Coöperative Union)	1887			Composed of Louisiana Union, Texas Alliance.
6	Nat. Farmers' Alliance and Industrial Union	1889	3,000,000-1890	National.	Composed of South'n Alliance, Agric'l Wheel, Knig'ts of Labor.
7	Colored Farmers' National Alliance and Coöperative Union.	1886	1,250,000-1891		Incorp. Albany, N. Y., Sept. 1, 1890.
8	Nat. Farmers' League	1889		Origin in N. Y. and Mass. Now national.	
9	Texas Alliance . . .	1875			Combined with La. Alliance under the name of Nat. Farmers' Alliance and Coöp. Union, 1887.
10	Citizens' Alliance . .	1890		Convent'n at Ocala, Fla., Dec., '90,	Originated in Kan. among townsmen.

APPENDIX B.

GROWTH OF THE PEOPLE'S PARTY.

Comparison of Streeter's (Union Labor) vote of 1888, with Weaver's vote of 1892. Over 715 per cent. gain. Gain of vote of 1894 over 1892, 42 per cent.

STATES.	1888	1892	1894	STATES.	1888	1892	1894
Alabama		85,181	83,283	Nevada		7,264	710
Arkansas	10,613	11,831	25,441	N. Hampshire		292	832
Arizona			2,902	New Mexico			1,835
California		25,352		New Jersey		969	
Colorado	1,266	53,581	82,111	New York	626	16,429	11,049
Connecticut	420	805	1,546	N. Carolina		44,736	148,344 ²
Delaware		13		N. Dakota		17,700	8,758
Florida ¹		4,843		Ohio	3,496	14,856	49,495
Georgia	136	42,937	96,888	Oregon	326	26,965	26,033
Idaho		10,520	7,112	Pennsylvania	3,873	8,714	19,484
Illinois	7,090	22,207	57,793	Rhode Island		227	223
Indiana	2,694	22,208	29,388	S. Carolina		2,407	
Iowa	9,105	20,595	31,904	S. Dakota		26,544	26,568
Kansas	37,738	163,111	115,609	Tennessee	48	23,447	23,092
Kentucky ¹	622	23,500		Texas	29,459	99,688	162,171 ⁴
Louisiana	39	27,930	26,563	Virginia		12,275	81,239
Maine	1,344	2,381	5,321	Vermont		43	740
Maryland ²		796	7,586	Washington		19,165	49,747 ⁶
Massachu'etts		3,210	9,037	W. Virginia	1,508	4,166	
Michigan	4,542	19,892	30,012	Wisconsin	8,552	9,909	25,604
Minnesota	1,094	29,313	87,931	Wyoming		7,722	2,176
Mississippi	22	10,118	10,256	Oklahoma			13,320
Missouri	18,632	41,213	42,263				
Montana		7,334	15,401		147,251	1,041,028	1,471,590
Nebraska	4,226	83,134	97,815				

Presidential election, 1892.—Result: Five Senators, 10 Congressmen, 22 electors, about 50 state officials, and over 1,500 county officers and legislators.

Congressional and gubernatorial elections, 1894.—Result: Six Senators, 7 Congressmen, 21 state officials, 153 state senators, and 315 state representatives (See Appendix C).

¹ No election in 1894.

² Vote for comptroller in 1893.

³ Republicans and Populists united.

⁴ Unofficial.

⁵ Total Congressional vote in Washington.

APPENDIX C.

SHOWING STRENGTH OF PARTIES IN LEGISLATURES, 1895.

STATES.	SENATE.			HOUSE.			TOTAL.			REMARKS.	
	No.	Populists.	Democrats.	Republicans.	Populists.	Democrats.	Republicans.	Populists.	Democrats.		Republicans.
Alabama . . .	1	8	24	1	42	65	1	50	89	2	1 Congressman.
Arkansas . . .	2		31		9	88	3	9	119	3	
Arizona . . .	3		6	6		7	17		13	13	
California . .	4		15	25	1	16	62	1	31	87	1 Congressman.
Colorado . . .	5	18	1	16	24		41	42	1	57	
Connecticut . .	6		2	22	1	46	205	1	48	227	
Delaware . . .	7		5	4		6	15		11	19	The remainder of the legislature Democrats.
Florida . . .	8	1			4			5			
Georgia . . .	9	5	38	1	47	126	2	52	164	3	
Idaho . . .	10	6	1	11	9	1	26	15	2	37	
Illinois . . .	11		19	32		61	92		80	124	
Indiana . . .	12		18	32		18	81		36	113	
Iowa . . .	13		16	34		21	79		37	113	1 Cong'sman, 1 Senator.
Kansas . . .	14	23	2	15	33	1	19	56	3	34	
Kentucky . . .	15		27	11	5	73	22	5	100	33	
Louisiana . . .	16		37			96	2		133	2	
Maine . . .	17			31		5	146		5	177	
Maryland . . .	18		21	5		68	23		89	28	
Massachusetts .	19		4	36		44	191		48	227	Besides 2 Prohib., 2 Fusion, 1 Labor Party.
Michigan . . .	20								1	99	* * The rest Democrats.
Minnesota . . .	21	5	3	46	9	10	95	14	13	141	
Mississippi . .	22				2			2			
Missouri . . .	23	2	19	15	2	58	80	4	77	95	* { Populist Dem. 20. 1 Cong'sman, 1 Sen.
Montana . . .	24							3	7	56	
Nebraska . . .	25	7		25	4	4	72	11*	4	97	
Nevada . . .	26	15*		3	13		12	28*		15	* Mostly Silv'ites., 2 Sen.
N. Hampshire .	27		3	21		101	262		104	283	Dem. by small majority.
New Jersey . .	28		5	16		6	54		11	70	
New Mexico . .	29										
New York . . .	30										3 Cong'smen, 1 Senator.
North Carolina .	31	26	9	15	33	46	36	88	54	51	
South Carolina .	32	29	7		104	17	3	133	24	3	
North Dakota .	33							11	7	75	1 Senator.
South Dakota .	34	10		33	15		68	25		101	
Ohio . . .	35		6	25		22	85		28	110	
Oklahoma . . .	36										Both houses Repub'n.
Oregon . . .	37	3	8	19	6		53	9	8	72	
Pennsylvania . .	38		17	33		70	134		87	167	
Rhode Island . .	39		2	35		3	69		5	104	
Tennessee . . .	40	3	20	10	7	60	32	10	80	42	
Texas . . .	41	2	29		22	103	3	24	132	3	
Utah . . .	42		7	11		14	31		21	42	
Vermont . . .	43			30		11	227		11	257	
Virginia . . .	44		28	2		90	10		118	12	
Washington . . .	45	3	5	26	20	4	54	23	9	70	
West Virginia .	46		12	14		22	63		34	77	
Wisconsin . . .	47		13	20		19	81		32	103	
Wyoming . . .	48		4	14	1	2	37	1	6	51	

APPENDIX D.

BILLS INTRODUCED IN THE SENATE BY SENATOR PEEFFER.

S. 1787. A bill directing the Treasurer of the United States, upon receipt of non-interest bearing twenty-five years bonds, not to exceed one-half of the assessed value of the property of any State, Territory, county, township, municipality, or incorporated town or village, said bonds to be retired at the rate of 4% per annum, to issue full legal tender Treasury notes to the face value of said bonds (estimated), \$12,000,000,000.

S. 1892. A bill to provide for the issue of \$2,500,000,000 in legal tender Treasury notes, to be loaned to States, counties, townships, villages, and individual citizens, without interest. \$2,500,000,000.

S. 1900. A bill authorizing a sufficiency of declaratory—not promissory, full, not partial, legal tender money, not in the excess of \$1,000 per capita, to establish systems of coöperation and for other purposes. \$68,000,000,000.

S. 325. A bill to increase the circulating medium by issuing Treasury notes to the amount of \$300,000,000, payable in lawful money of the United States. \$300,000,000.

S. 486. A bill to authorize the issue of \$600,000,000 in declaratory legal tender money, and for other purposes, and forthwith call in all bonds for immediate redemption. \$600,000,000.

S. 916. A bill to direct the Secretary of the Treasury to purchase all silver bullion mined in the United States that may be offered at \$1.29 per ounce, less the charge of coining, and that full legal tender notes shall be issued to eight times the value of the silver so purchased, not exceeding \$50,000,000 per month, and to continue for three years. \$1,800,000,000.

S. 1050. A bill directing the Secretary of the Treasury to have coined all gold and silver now in the possession of the Government, and also to have coined a sufficient amount of paper, gold and silver money. \$6,000,000,000.

S. 1177. A bill directing the Secretary of the Treasury to prepare and issue Treasury notes to an amount equal to three and one-half dollars for every dollar's worth of gold and silver coin and bullion belonging to the United States, not set apart or reserved by law, (estimated) \$300,000,000.

S. 2029. A bill directing the Secretary of the Treasury to pay off all interest bearing obligations, all Treasury notes, gold and silver cer-

tificates, and national bank notes, and to issue paper money to the amount necessary to pay as aforesaid, and also to pay all salaries of officers, or wages, and all appropriations made by Congress whatsoever. \$2,000,000,000.

S. 1300. A bill to appropriate \$6,300,000 for immediate use in relieving want and destitution, but not to exceed in any State \$1 for every ten inhabitants. \$6,300,000.

S. 976. A bill to establish a bureau of loans on real estate and personal property, and the issue of Treasury notes equal in amount to one dollar and a half for every dollar's worth of gold and silver coin and bullion belonging or coming into the possession of the United States, except the redemption fund (estimated), \$800,000,000.

S. 595. A bill to provide for the immediate issue and circulation of \$250,000,000 of Treasury notes. \$250,000,000.

—*N. Y. Tribune, Dec. 11, 1894.*

APPENDIX E.

EDITORIAL FROM THE "NATIONAL WATCHMAN," NOW UNITED
WITH THE "SILVER KNIGHT" UNDER THE NAME OF
"SILVER KNIGHT AND NATIONAL WATCHMAN,"
WASHINGTON, D. C.

"The time for Populism and Socialism to part has come, and those who fail to realize that situation will have in the near future ample time to reflect upon their error in judgment. What we want now is a clean cut, aggressive, intelligent propaganda upon financial reform. Let us be honest and truthful, in order to attract the good and just. Let us be conservative, in order to secure the support of the business men, the professional men, and the well to do. These are elements we must use if ever success comes to our party. For every loud-voiced socialist who declares war upon us, we will get a hundred of the conservative element of society. What we want is success now; a change of conditions in the immediate future. What will happen fifty or one hundred years from now is giving us no particular worry. We are making a fight to fill the empty stomachs that are aching now, to clothe the naked backs that are shivering now, and to relieve the distress that is seen among the people at the present time. Every man who will join us in such an effort is our brother, and every one who, through impracticable ideas, seeks to postpone this day of deliverance and relief is not only our enemy, but the common foe of hu-

manity. Now is the time to unite and labor upon common grounds for one great purpose. When that is settled, when the people are again clothed and housed, other reforms will come in their order and nothing can prevent their coming. Let us drop the little differences that have been cropping out here and there, and unite upon the propositions found in this manifesto.

—Feb. 22, 1895. (See pp. 157, 158, Chapter VIII.)

APPENDIX F.

C. W. DAVIS' ESTIMATE OF SAVING BY GOVERNMENT OWNERSHIP OF RAILROADS. (In the *Arena*, Vol 4, 289.)

SAVINGS.	
From consolidation of depots and staffs	\$ 20,000,000
From exclusive use of shortest routes	25,000,000
Attorney's fees, salaries and legal expenses	12,000,000
Passes	30,000,000
Saving from abrogation of commission evil	20,000,000
Dispensing with high priced managers and staffs	4,000,000
Disbanding of traffic associations	4,000,000
Dispensing with presidents	25,000,000
Saving by abolishing offices (all but local) solicitors	15,000,000
Saving of five-sevenths of advertising account	5,000,000
Total saving by reason of better management	\$160,000,000

APPENDIX G.

POPULIST MANIFESTO—FEB. 22, 1895.

To the Members of the People's Party, Greeting :

As early as 1865-66 a conspiracy was entered into between the gold gamblers of Europe and America to accomplish the following purposes : To fasten upon the people of the United States the burdens of perpetual debt ; to destroy the greenbacks which had safely brought us through the perils of war ; to strike down silver as a money metal ; to deny to the people the use of Federal paper and silver—the two independent sources of money supply guaranteed by the Constitution ; to fasten upon the country the single gold standard of Britain, and to delegate to thousands of banking corporations, organized for private

gain, the sovereign control, for all time, over the issue and volume of all supplemental paper currency. Thus they doubled the demands for gold; forced upon the country an appreciating money standard, entailing an indefinite period of falling prices; robbed enterprise of its just profits; condemned labor to idleness and confiscated the property of debtors.

For nearly thirty years these conspirators have kept the people quarreling over less important matters, while they have pursued with unrelenting zeal their one central purpose. At the present moment, every device of treachery, every resource of statecraft, and every artifice known to the secret cabals of the international gold ring are being made use of to deal a blow to the prosperity of the people and the financial and commercial independence of the country. They seek to accomplish their purposes before the blow can be averted by an awakened public through the ballot. Their plans have been long matured and their line of action is fully chosen. They address themselves to one subject—the money question—in all its breadth and magnitude. This brings the country face to face with a perilous issue, which calls for immediate and definite action on the part of the people. Every behest of patriotism requires that we shall at once meet the issue and accept the challenge so defiantly offered. We must meet the issue as it is presented to-day. To falter now is to invite disastrous failure. We earnestly urge the Populists throughout the country to consecrate their entire force and energy upon the tremendous contention presented, and thus meet the enemy upon his chosen line of battle. Invite the aid and coöperation of all persons who favor the immediate free coinage of silver at a ratio of 16-1, the issue of all paper money by the government without the intervention of banks of issue, and who are opposed to the issue of interest bearing government bonds in time of peace. In a word, to extend the hand of fellowship to all who agree with you upon the money question, which is certainly the mightiest and most fundamental controversy evolved during the present century.

ST. LOUIS, Feb. 22, 1895.

Signed,

LAFÉ PENCE,
O. M. KEM,
T. J. HUDSON,
WM. BAKER,
W. A. McKEIGHAN,
WM. V. ALLEN,
JOHN DAVIS,

W. A. HARRIS,
JERRY SIMPSON,
JOHN C. BELL,
JAMES H. KYLE,
HALDOR E. BOEN,
H. E. TAUBENECK,
J. H. TURNER,

J. B. WEAVER.

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THE PRESENT MONETARY SITUATION

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TRANSLATOR'S PREFACE.

The address here translated gives a brief summary of the conclusions of a recognized authority on monetary questions on the larger and more general aspects of the silver situation.

In the original, the chapters are not numerically designated, but appear under the following heads :

Der gegenwärtige Stand der Währungsfrage. Vortrag gehalten in der Gehe-Stiftung zu Dresden am 16. Februar 1895.

Anhang.

Nachwort.

A simple numerical designation of those different parts is used in the translation, with sub-titles indicating the topics taken up.

The address which forms the first and main part of the publication was delivered at Dresden in February, 1895, and refers to the situation as it then stood. The changes since that date have been slight, and in no way affect the substance of the arguments. In a few places brief notes have been added, explaining the text, or bringing figures more nearly to date.

While some of the matter in the later parts is of a controversial nature, and refers more especially to the

mode in which Professor Lexis gradually reached his present views, the whole is believed to be of interest to American readers, and is accordingly reproduced without abridgement.

JOHN CUMMINGS.

THE PRESENT MONETARY SITUATION.

I.

THE PRESENT MONETARY SITUATION.

In 1871 Germany took the first step toward the reform of her currency system—a reform at that time so necessary as to be unavoidable—and with the law of July 9, 1873, she brought the great work through to a provisional conclusion.

Who could think, however, in that period of hope and public felicitation over the creation of the German Empire that the work of reform would rest under this law, and that it would remain after the lapse of more than two decades as incomplete to-day as the law left it then? that the anticipated change to a gold standard, pure and simple, would not yet be altogether accomplished, nor silver thrust wholly out of circulation?

In other words, who could think that Germany would still find unsolved to-day the problem of determining her monetary standard? Not that everyone took so optimistic a view of the matter at that time as did a certain minister of the Prussian government who believed the reform might be left to take its own course. Many expressed their fear lest the adoption of the gold standard by Germany should lead to an appreciation of gold, and some few—Ludwig Bamberger, for example,

a leader in the party which favored gold for a standard—saw clearly that the real difficulty lay in the query, “Whither with the silver?” The real difficulty lay here, because the demonetization of silver by Germany alone and the introduction of her stock of that metal into the world market for sale, might very conceivably cause silver to fall. No one held it within the range of possibility, however, that silver should depreciate to anything like the extent it has actually done since that time—not alone, surely, nor even chiefly, in consequence of German monetary legislation.

The extraordinary fall of silver, so generally unlooked for by the friends of currency reform, was the check which brought the work to a stand before the fulfillment of the original plan. As early as 1879, when silver had lost one-sixth its value—and that, too, although it had formerly been subject to but slight fluctuations—the imperial government thought it wise to suspend the sale of thalers, since on sales at the rates current the loss seemed too great. Besides the government hoped a stronger and steadier market, wherein later sales of silver might be made to better advantage, would follow these first bids. This hope, like that which led the United States in 1878 to undertake the coinage of silver under the so-called Bland act, remained unfulfilled; and that is how the German currency system to-day happens to be loaded down with a balance of some 400,000,000 marks (\$100,000,000) in thalers, intrinsically worth at present barely half what they were worth in 1879.

Here, then, we come upon one of the evil conditions

of our present currency system. That the original plan of monetary reform should not have been carried out, and that we should have in place of a simple gold standard what may be called a limping double standard—with a quantity of silver in circulation rigidly limited and inelastic—would have been in itself no great misfortune. The misfortune is that the silver three-mark pieces which one must receive at face value, are at present intrinsically worth but one mark 35 pfg.; while the whole amount of such coins, nominally 400,000,000 marks (\$100,000,000), are actually worth all told but 180,000,000 marks (\$45,000,000). To this must be added our 480,000,000 (\$120,000,000) of small silver coins, which are even more overrated than the thalers; the market value of the silver in these coins has fallen to 194,000,000 marks (\$48,500,000).

It follows that the silver circulation of the German Empire involves the use of credit to the extent of not less than 506,000,000 (\$126,500,000) out of a nominal total of 880,000,000 marks (\$220,000,000). Without doubt the credit of the Empire is strong enough to bear this burden and even a further increase of it; and yet for all that the existence of such a mass of silver circulating at a fictitious value might become a very serious menace in a time of crisis—especially in event of a protracted war, when it might be needful to make considerable issues of paper. The framers of the currency law of 1873 would surely have rejected peremptorily, as altogether inconsistent with sound monetary principles, any suggestion of a subsidiary silver currency actually worth but 40 per cent. of its stamped value.

One danger lurking in our monetary system we have not yet encountered, to be sure, though we have good cause to fear it under present conditions. I refer to the possibility of private coinage, or illegal stamping, of silver pieces having the exact legally prescribed weight and fineness. Sporadic attempts at this sort of thing have been made in Germany, but none of any great significance, even had they not been exposed in their incipency. From such clandestine coining serious injury can result only if it be undertaken on a large scale, and with the aid of a fair amount of capital. The development within the country of anything of this sort need hardly be feared, for it would almost certainly be brought speedily into public cognizance. But foreign capitalists of easy consciences might feel allured to an operation which would give their silver a fictitious value, 100 per cent. above its market value. And it is to be noted that such private minting, as it is called, where the pieces are full weight and of foreign stamp, in certain countries is not considered criminal. The same danger, of course, threatens other countries with silver in circulation overvalued. So it was said great quantities of counterfeited money turned up in France on the withdrawal from circulation of the Italian subsidiary coins; but this report proved later to be unfounded. In America, however, a pretty considerable amount of counterfeited silver dollars have been drawn out of circulation; and recently from Spain has come an announcement of similar trouble, with the conjecture that several millions of counterfeited five-

pesata pieces have been introduced into that country from America or France. Germany should then look well to her own interests. It would seem worth while at least to forbid the importation of silver coins bearing the German stamp. Russia long since resorted to a similar regulation to protect her outstanding subsidiary silver, which from the first has been highly overvalued.

The decline in value of German silver mines, the richest in all Europe, is a further consequence of the decline in value of silver, and one of grave import for certain districts of Germany. With her united product Germany continued to rank fourth among the silver producing countries, even after the opening up of the Australian mines; but rather more than half the product of German furnaces is from foreign ores. Taking account of silver derived from German mines only, the product of 1892 amounted to 212,000 kilograms, and for 1893 to 198,000 kilograms. Prior to the fall in value of silver a year's product of say 200,000 kilograms would have been worth 36,000,000 marks (\$9,000,000), while at present prices it brings in but 16,000,000 marks (\$4,000,000). Here is a loss of 20,000,000 marks (\$5,000,000) which makes easily comprehensible the difficulty found at present in making the mines of Saxony and Hartz pay for working.

Outside the bounds of our own political administration, we see one consequence of the depreciation of silver in the disturbance of the rates of exchange. Up to the time when depreciation began the rates of exchanges in international dealings had remained almost

unvarying between those countries on a gold basis,—England, Germany, France and the United States,—and those on a silver basis,—among which may be counted China, India, practically Japan and, in America, Mexico with several states of lesser consequence. In the beginning of the year 1870 the Indian rupee was quoted on the London exchange, with slight fluctuations, at about 23 pence, or approximately two marks. Since 1874, however, the rupee has tended, with incessant and at times very considerable oscillations up and down, to fall, and now, in spite of efforts made since 1893 to keep up its value artificially, it has sunk to 12½ or 13 pence. The rate of exchange for the Chinese tael, a coin solely dependent for its value upon the price of silver, has fallen even more than that for the rupee. During the last twenty years those countries upon a silver basis have stood in relation to the gold standard countries in the category of countries issuing a depreciating paper money. The uncertainty in western countries and in countries of eastern Asia, as to the value of the metal used for a standard naturally has led to a further uncertainty in determining the value of the important commercial products offered in the course of foreign trade by these countries. Accordingly in these exchanges there has always been the chance of illegitimate gains and losses for all parties concerned—a feature of the trade which has proved injurious to legitimate business undertakings where speculative risks are avoided.

What has long since been noted as true of lands on a paper basis, is clearly seen to be true here also; namely,

that any rise or fall in the country's monetary standard, which makes its appearance first in foreign exchanges, by no means extends itself at once throughout the length and breadth of the country. The purchasing power of the money as regards home products and labor in the home market is not immediately affected. On the contrary, it is found that changes in the purchasing power of the money at home lag far behind any changes in foreign rates of exchange. Especially in the case of a continuous depreciation of the standard metal, the currency may maintain within the country for a long time a purchasing power considerably higher than is warranted by the rate of foreign exchange. When the depreciation of the metal ceases, a gradual adjustment of rates and prices within the country may be expected. The time required for the completion of this internal readjustment varies. Where the population is great, or business intercourse within the country backward and primitive, or the economic status of the country low, the process is protracted. If as a further embarrassment the country contracts foreign debts to any considerable extent, and must transfer through the medium of goods exported, large sums each year in payment of interest charges and other obligations, the divergence of foreign rates and domestic prices is likely to develop anew at any time; and this divergence compels the debtor country, since its own circulating medium cannot be used in making foreign payments, to crowd foreign markets with its home products until it can get the disposal of an amount of foreign money sufficient to settle its foreign obligations.

The above specified conditions undoubtedly exist in British India. Here is a country with a population of 290,000,000, in an extremely primitive stage of civilization,—except for an insignificant minority of the population,—where consequently the laborers get on with the lowest wages conceivable. The circulation of money is slow, and a very great portion of the mass of silver brought into the country year in year out, always disappears in the millions of little private hoards, and can, therefore, have absolutely no effect upon trade and prices. Finally, the Indian government has to pay yearly sixteen to seventeen million pounds sterling in the form of interest, pensions, and like remittances to London. Therefore, in my opinion it is also an inevitable consequence that the purchasing power of the rupee in India, when offered in exchange for products and labor, should be more nearly what it was, and should not have fallen to anything like the same extent that it has fallen in relation to gold. The statistics of prices in India furnish a sufficient verification of all this, provided inferences drawn from these statistics be carefully made, with circumspection and full allowance for the manifold factors at work in the formation of prices.

When, for example, the Indian merchant in London receives for one hundred-weight of cotton in England 25 shillings, and exchanges these, at the current rate of not quite 13 pence in the rupee, for 23 rupees, the transaction yields him a greater profit than a similiar transaction would have done in 1872. In 1872 the rupee was worth 23 pence and the same prices for cotton held in

England ; then a similar transaction would have yielded the merchant but 13 rupees. So, even if the prices of necessities and the wages of labor in India, owing to the decline in the value of silver, had actually risen since 1872, 10 or 12 per cent., reckoned in rupees, it would still be true that the 23 rupees to-day would possess a very considerably greater purchasing power than the 13 rupees did then. Hence the Indian producer can better bear the present unusually low price of cotton than can the American producer, who must pay wages, living expenses and other costs in gold or in some form of credit money equivalent to gold. Since the Indian product must be subjected to the severe competition of the world market, the seller by no means as a general rule obtains an unusually high rate of profit, or premium on export ; but he is enabled by the favorable rates of exchange to procure sales through a lowering of his price, and still make the normal rate of profit, while his competitor reckoning on a gold basis can under the same scale of prices perhaps no longer cover cost of production. So, as one consequence of the decline in value of silver, the price of this article of commerce, which is extensively produced in India and in other silver standard countries, is forced down.

To obtain cotton, jute, spices, tea, and other products peculiar to Eastern Asia as cheaply as possible, is clearly desirable and to the great advantage of European nations ; but along with other products from India we get wheat, and competition here adds to the embarrassment of European husbandry.

European cultivators believe they find here, in the fall of silver and in the consequent effects of that fall on the monetary standard of India and on foreign exchanges, a chief cause of their distress. And this view of the case receives some justification from what has just been said; the introduction of Indian wheat into Europe has in some measure been favored by the depreciation of silver. But the influence of this circumstance upon the range of prices in the world market must not be overestimated. In comparison with other factors that should be taken into consideration, it is relatively unimportant, as is shown by the moderate proportion—approximately 1:9 or 1:10—which represents the extent to which India is on the average concerned in the total importation into Europe of wheat. How little responsible the monetary standard and the rates of exchanges are for the total export of Indian wheat, is shown by some recent figures. In the fiscal year ending on the 31st of March, 1893, the export of wheat was greater than ever before in any one year, amounting to 30.3 million quintals, although in this year the price of silver stood higher than in the fiscal year 1889-90, and higher than it stood in the two years previous. Again, the export of wheat sank in 1892-3 to 15,000,000 quintals, less than half the export of the year previous, although the depreciation of silver in that year brought silver down to a point never reached before.

The real explanation of the movement in prices during this period is found in the almost universally

poor harvests of 1891, and in the very rich harvests following; together with the new imports of wheat from Argentine, which of late years have been increasing so rapidly. One is not, however, warranted in concluding from this that the decline in the exchange value of the rupee has exercised no influence over the European price of wheat. Obviously one may say that India in 1892-93 would have been able to sell, instead of 15,000,000, perhaps not more than 10,000,000 quintals of wheat, or still less, if the rupee had been worth its former price in gold. Hence the decline in prices to a certain extent, if to no great extent, is attributable to the depreciation of silver.

At the Asiatic end of the exchange, however, the above condition of affairs works as a hindrance in the natural course of commerce between Europe and eastern Asia. The mass of the population of India and China are not able, since their wages have not risen to the extent that the gold value of silver has fallen, to pay much more in silver now than formerly for European articles, and these same or but slightly increased prices in silver bring in a much smaller amount of gold now than formerly. The European manufacturer must content himself now with decidedly lower gold prices for his wares sold in India and China; or if he will not or cannot submit to this reduction in prices, he must put up with a considerable lessening of his sales, if not with an entire cessation of them.

Some English observer may urge the contrary; briefly, that the quantity of English cotton goods

sent to India since the beginning of the year 1870, when silver first began to depreciate, has markedly increased. As a matter of fact, however, the quantity of cotton goods sent into India has during the last few years been notably less than it was about the middle of the last decade, and to a great extent the falling off comes from the diminished gold values of the commodities sent. The prosperity of the Indian merchant is, however, not to be judged by the amount of goods sold, but solely by the prices obtained. In the exportation of commodities to eastern Asia, England now certainly takes the lead; but a very small portion of Germany's exports find their way into that quarter of the globe. English competition, however, becomes more sensitive to the presence of German wares in other markets, even in the home market, as it is forced to retire from the markets of India and China; and in these distant countries the market for European wares bids fair in the future to become more restricted, owing to the rise and growth in them of European industries, run by European help. In India already a fair start along this line has been made. Here again, however, one would not be warranted in attributing the unfavorable state of the market in eastern Asia either altogether or even to any great extent to the depreciation of silver. More than anything else the sharp play of world-wide competition, together with improvements in production and a lowering of the cost of transportation, is here, as elsewhere, at bottom the cause of the considerable decline in silver prices of cotton goods brought to India. The

depreciation of silver has surely been one factor working to lower prices in eastern Asia relatively to European prices; but by no means the most important or the decisive one.

Up to this point I have concerned myself with some of the injurious consequences which seem to me to be bound up with the demonetization of silver by the great powers, in so far as this action on their part may be regarded as a chief cause in the enormous depreciation of silver. I hope these evils may be overcome in the natural course of the world's economy. But I find no cure-all for them in bimetallism, as it is called, or in an international double standard. When bimetallists bring grave charges against the gold standard, I for one entirely dissent from their opinion. They wish to load upon the gold standard the chief blame for the business depression which without doubt has followed the undue development of speculation in 1890. The strong downward movement of prices of almost all the great commercial products, they would have us believe, is due not at all to overproduction, not at all to the cheapening of the cost of production and of transportation, not at all to the opening up of new lands with large wastes of virgin soil, but is caused by an appreciation inherent in gold itself. Gold cannot, they say, without a considerable appreciation in value, as a money metal fulfill all the uses which formerly gold and silver together served; the appreciation of gold reflects itself plainly, so it is thought, in the falling prices of commodities.

It cannot by any means be urged to-day, however,

that the entire function of serving as money has been thrown upon gold alone. With the exception of England, all the countries on a gold basis have still in circulation vast quantities of silver money. Germany, as has been already noted, has at least 400 million marks in thalers (\$100,000,000); France and the other states of the Latin monetary union, about three milliards in five-franc pieces (\$600,000,000); Holland has retained its entire silver currency in spite of the introduction of the gold standard, as has also Austro-Hungary; and Spain, during the years from 1876 to 1892, coined 641,000,000 francs in five-pesata pieces (\$128,200,000). Above all, the United States coined in the years 1878 to 1890, the enormous sum of \$416,000,000, or 1,750,000,000 marks, under the Bland bill, and in the years 1890 to 1893, under the Sherman act, it issued in addition \$151,000,000 in treasury notes, covered by silver purchased in exchange for them, and so equivalent to a further coinage of silver to the full amount of the notes issued. It must be borne in mind, further, that the coinage of silver in India, down to June 26, 1893, was entirely unchecked, and continued at the rate of 130 to 140 millions of marks (\$32,500,000 to \$35,000,000) a year—reckoning silver at its original value; that, furthermore, at the present time this metal is preferred to gold, and demanded in great quantities as a money metal in China and Japan. The use of silver as a money metal has then clearly been limited geographically through German monetary reform legislation and the cessation of the coinage of silver by other European states; but silver has by no means been thereby entirely discarded.

Statistics seem rather to show that in the world at large there has never been a time when the average yearly coinage of silver has been so great as it has been in the two decades following the German currency law of 1873. Only since the cessation of coinage in India, in June, 1893, and since the repeal in November of the same year, of the Sherman act in America, has one really been able to speak of silver as demonetized; for prior to these acts the demonetization remained an unaccomplished fact. These acts, however, which caused a fall in the price of silver from 38 to 27 pence, had no influence worth mentioning upon the business depression which had already set in. In the summer of 1893, the United States was suffering under the stress of a severe commercial crisis, from the effects of which she has not yet entirely recovered, and the Sherman act was repealed because it was held to be responsible for the hard times. With regard to the United States, the question I have often put to those who defend the notion that gold has undergone an appreciation peculiar to itself—and I have never yet had the question satisfactorily answered—is this: How has it been possible that the United States, which from 1878 to 1893 created more silver coins or silver notes, than all the European states taken together in an equal period of years from 1873, and more than the United States would have been able to coin under a general international system of bimetallism (since other states would under such a system have obtained a larger share), how has it been possible that the United States, which itself pro-

duces yearly in addition to the above sum, 140,000,000 to 150,000,000 marks (\$35,000,000 to \$37,500,000) in gold, and coins a correspondingly great sum, and which besides all this has in circulation \$346,000,000 of United States legal tender notes left over from the paper issue of the late war, how has it been possible that the United States with a double standard actually in operation, and an abundance of monetary mediums of exchange, has suffered a business depression as great as, perhaps even greater than, the one brought about in Europe professedly through the gold standard? and that prices of commodities in America, in spite of the protection given the home market through high tariff duties, have constantly exhibited the same movement downward as is found to have taken place in Europe? Is it not then quite evident that a movement of prices in the countries of two continents having such widely differing monetary standards, a movement displaying the same variations, must have other causes than the demonetization of silver, which had taken place in America only very recently and which for that matter has not prevented the continuance in circulation down to the present time of \$567,000,000 (2,380,000,000 marks) in silver money circulating at its full nominal value?

But how about the alleged scarcity of gold in those European states actually on a gold basis, even if in certain of these countries the gold standard has not yet been in every respect fully perfected? That financially disturbed states, and those states much indebted to foreign countries are not in condition to secure for them-

selves gold in the quantities wished for, nor to retain it when secured within the country, is as little kept in mind here as the fact that a private person of uneconomical habits, or one who for any other reason has suffered a loss of property, may find that the flow of gold and the flow of money out of his cash-box take place together. When in connection with the question of a monetary standard the scarcity of gold, or need of it, is taken into consideration, the point of view taken is always that of public economy, and one not commonly taken in judging private affairs: the lowering of general prices is accordingly quite explained as the result of an insufficient supply in the community of the mediums of exchange.

Can it now be said that any insufficiency of currency exists in those states whose finances are, in a normal condition, in England, Germany, or France? Germany possesses to-day in gold, and in silver money depending upon gold for its nominal value, an amount of metallic money double the amount of silver which it had at the beginning of its monetary reform, when its circulation was almost exclusively of silver, and this too, although the population has increased meanwhile only from 40,000,000 to 50,000,000, and although the check system, which makes possible a very great saving in the circulation of money, has been extensively developed within this same period. The reserve of the Reichsbank has risen to 1,100,000,000 marks (\$275,000,000), and of that sum there are certainly more than 600,000,000 (\$150,000,000), perhaps 700,000,000 marks (\$175,000,000) in gold; the note issue, however, at the end of the

month of January amounted to 54,000,000 marks (\$13,500,000) less than the reserve. In the Bank of England an excess of reserve over and above the note circulation has become a chronic condition since the beginning of the year 1893, and in June, 1894, the surplus reached the extraordinary sum of 14,000,000 pounds sterling,—more than 280,000,000 marks (\$70,000,000),—while at the same time the banking reserve stood at 39,500,000 pounds, a sum never before equalled. This coin balance, it is true, had fallen by the beginning of this year about 7,000,000 pounds sterling. At present, however, it amounts to 36,750,000 pounds, and is still about 12,000,000 pounds greater than the total note circulation. In France also, throughout 1894 the gold reserve of the bank was on the increase, and on the 7th of February it had reached the unprecedented sum of 2,141,000,000 francs (\$428,200,000). There must be added to this a balance of 1,236,000,000 francs in silver coin; so that the total reserve is about 3,400,000,000 francs (\$680,000,000), and of the notes in circulation all but about seven per cent. are covered by this metallic reserve. Moreover, gold is not at all held back by these banks, since the notes are actually and unconditionally redeemable in gold, and are offered to the public when the conditions of credit are favorable. The official rate of discount, by the year or day, has stood at the lowest point, and in the open market of Berlin and Frankfort has ranged from 1 to 1½, while in London it has fallen below 1 per cent. Finally, there has been withheld and shut up within the government treasuries

and bank vaults of certain countries having a paper standard, legally so established or actually so in operation,—in Russia, Austria, and Italy,—gold amounting to more than two milliards of marks (\$500,000,000); these hoards have not, however, hindered the amassing of gold in the vaults of the great central banks, as stated above.

Nor can it be said in a more popularly economic sense that there is a scarcity either of gold or of money in countries with a metallic standard. The Bank of France alone would be able to advance the entire amount of the recent American loan in gold, and still leave her reserve at a point considered heretofore incredibly high.¹ Nevertheless one is justified in saying that the accumulation of these enormous sums in the bank vaults of Europe, together with the existing insignificant demand for notes, is a cheerless symptom of economic stagnation, brought about in its turn by low prices. Stagnation is, therefore, the cause of the superfluity of idle money. No one can assert the contrary, that it is scarcity of money which has caused stagnation.

Finally, by way of taking away the last bit of stand-

¹ That Americans have recently found difficulty in placing their new loans [the bond syndicate loan of 1895] even at a rate of almost 3½ per cent., is in itself no evidence of a scarcity of gold, but is a consequence of the headstrong refusal of the silver men to permit the issue of bonds expressly promising to pay interest and principal in gold: With such bonds they might easily have obtained from Europe \$100,000,000 in gold at 3 per cent., without any opposition whatever on the part of the banks, at that time overloaded with the metal. A "coin" bond, however, imposed a risk which must be offset by a higher rate of interest.

ing ground from under the appreciation-of-gold theory, we need only glance at developments during the last few years in the gold mining industry. The fall in general prices has never been so marked as in the years from 1891 to 1895; never have the index figures calculated by the English *Economist* for determining price fluctuations stood so low as at the end of 1894. Yet the world's production of gold has increased year by year very considerably since 1888, and in 1894 it amounted approximately to 720,000,000 marks (\$180,000,000)—not taking into account the product of the Chinese Empire, an unknown quantity. This is more than 150,000,000 marks (\$37,500,000) above the average yearly production during the last fifty years, which has been a period of great productiveness in California and Australia. If we suppose an industrial consumption of money each year amounting to 300,000,000 marks (\$75,000,000),—which is, however, placing that consumption perhaps some 20,000,000 (\$5,000,000) too high,—the balance of gold serving for monetary uses in the civilized world has increased, during the years from 1891 to 1894, approximately more than 1,200,000,000 marks (\$300,000,000), while general prices have continued steadily downward. Neither has the new supply of gold in any way operated as a stimulus in the business world at large; it has only served to increase the stores of gold lying idle in the cellars of the banks. This is one more striking proof of the fact, which in other ways is sufficiently borne out—even if it is often not very obvious,—that an increase in

the quantity of money is not by any means sufficient in itself to exercise any direct influence over prices; that these depend much more, in the first instance solely, upon economic forces and conditions, while the quantity of money here plays as it were only a formal role. If the real conditions necessary for a rise in general prices be present, then to be sure an abundant supply of money may strengthen this movement; and, on the contrary, a deficiency of money may increase the intensity of the crisis, and of the effects of the crisis upon prices.

This secondary role played by money in the determination of prices, must be borne in mind by one who would pass judgment upon bimetallism. In the opinion of those who oppose the use of gold as a standard, bimetallism promises to bring relief from all the evils which have sprung or are alleged to have sprung from the demonetization of silver. I do not by any means oppose chiefly the bimetallic theory as such: furthermore, I realize that a ratio determining the value of the two precious metals, and adopted by all the great powers, including England—provided this ratio did not differ greatly from the ratio arising from the conditions of production of the two metals—might under free coinage maintain both metals in trade, so long as fluctuations in values were very moderate. I believe even from a theoretical standpoint that the old French ratio of $1:15\frac{1}{2}$ might be now re-established and maintained by such a bimetallic federation, provided the conditions of production were now what they were in the beginning of the decade 1880-90. This appears to me to be con-

ceivable, because up to that year there had been produced of the two metals together about 900,000,000 marks (\$225,000,000) a year, and of each on the basis of the old ratio about equal quantities. These conditions, however, do not now exist; the amount of silver alone produced in 1893 equalled, according to its former value, 900,000,000 marks (\$225,000,000), while in the same year the amount of gold produced equalled about 620,000,000 marks (\$155,000,000). Now it is true that the quantity of gold produced is on the increase; it may perhaps in this present year rise to 750,000,000 marks (\$187,500,000), and maintain itself on an average for several years at this point. It is not to be expected, however, that it could ever come near equalling the increase in the production of silver which would probably follow the re-establishment of the former value of this metal in gold. It is true that less silver was produced in 1894 than in 1893 and, should present prices continue, I should not marvel to see the amount produced fall from 5 million kilos gradually to 4, perhaps even to 3 million kilos. So soon, however, as the former price of 180 marks (\$45) per kilogram should be re-established, a very considerable increase in the amount produced might be expected surely to follow; and with a long continuance of this price the amount produced might increase to 6 million kilos, perhaps even to a greater amount. The examination of geological experts in the Silver Commission¹ has confirmed the opinion that, when the extraordinarily rich upper veins of silver, the so-called silver lodes, have

¹ Of Germany, in 1894.

been more or less rapidly exhausted, the quantity of silver ore, relatively of small value at present, will then constitute a source of supply practically inexhaustible; a source from which each year a quantity of silver may be taken increasing as the effort made to obtain it intensifies, as the technical means of production and metallurgic processes employed improve, as the resources of Mexico, Peru, Bolivia and other American countries are unlocked through the further extension of railways, and especially as foreign capital finds its way more and more into these countries. All these conditions, necessary for a great production of silver would, however, be created should the price rise again to 60 pence. At that price American mines of average fertility, worked hitherto at a production cost of 30 pence per ounce, would have in prospect enormous dividends.¹

¹ It is evidently a complete *non sequitur* for one to argue that since the fall in the price of silver has been accomplished by an increase in production—a consequence chiefly of technical improvements and of a lessened production cost—so on the other hand would a rise in prices under bimetallism cause a limiting of the amount produced. Rather would working of silver mines be pushed on with new vigor to their extreme capacity when the danger of overproduction no longer acted as a check, and when silver in quantities to suit the producer might, at the mint, be converted into money at a fixed rate. Every pound of silver left in the earth longer than was absolutely necessary would then be so much buried money—causing a loss of interest. So also if raw gold exchanged for a sum greater than its cost of production, it would be sought everywhere with the greatest possible activity and industrial effort. A state monopoly of silver mining might, indeed, keep production within the desired narrow limits, but in the German Silver Commission the representatives of all parties concurred in the opinion that any such regulation as would be necessary for the accomplishment of this purpose, on a universal international basis, was quite impracticable. One cannot judge correctly the condition of affairs in the United States, and still less so that in Mexico and South America, from conditions existing in Germany.

Assuming, then, the bimetallic league to be consummated, and silver actually brought back to its former value, the silver production to be counted on would, in all likelihood, amount to 1,000,000,000 marks (\$250,000,000) at least, and this in face of a production of gold for the next ten years of 700,000,000 marks (\$175,000,000). Of the gold, 400,000,000 (\$100,000,000) would serve to increase the quantity of money in existence, while of the silver, double this sum at least would be forced into monetary circulation. The consumption of silver in the arts at the present low prices amounts to barely more than 1,000,000 kilos, and in the event of any such rise in the price, as is assumed, to double its present value, this industrial consumption must diminish; therefore, if we estimate this consumption at 200,000,000 marks (\$50,000,000), roughly 1,000,000 kilos, we allow more than we need do. With a stream of 400,000,000 marks (\$100,000,000) in gold and 800,000,000 marks (\$200,000,000) in silver flowing each year over the exchanges of the bimetallic world as money, inevitably silver everywhere must first equal and then exceed, by larger and larger amounts, the gold in circulation. Now, however, there exists pretty much everywhere, and more especially among the forehanded in the community, what we may call a prejudice in favor of gold, and this prejudice would grow stronger as silver came more and more to hold the upper hand in monetary use, and as the comparative scarcity of gold became more and more obvious. As time went on, too, popular distrust would oftener raise the question, what would happen if the

bimetallic combination broke up, or even if only one of the greater states stepped out? Would it then be gold which would fall in value? No, every man would say to himself, not gold, since the most powerful and the wealthiest states would make gold their standard of value, and other nations would then be forced to recognize its great worth. What now of silver in such an event? It would immediately fall lower than ever before. Even should one consider the assumed dissolution quite improbable, one would still be influenced by the consideration that silver could not of itself maintain the purchasing power imputed to it, and that its value must be kept up artificially; while the value of gold would in no way depend upon the support of any international combination. On account of its higher intrinsic worth in the eyes of the general public, gold would soon come to bear a premium over its legally established value; in other words, silver would become the sole standard of value, and gold would be bought and sold with it at varying rates of exchange. A rise of this premium to 1 or 2 per cent. would be quite sufficient to force gold out of ordinary business exchanges.¹

¹ In France, for instance, typically the double-standard country, there existed down to 1848 a premium on gold of not more than 1 per cent., and as a consequence silver was the only metal left in actual circulation, and for the time the real standard. With the great inflow of gold from California and Australia in the fifties, there arose in place of the premium on gold a premium upon silver at times amounting to $2\frac{1}{2}$ per cent. Then gold became the usual money metal and the standard; moreover, silver was drawn away in such great quantities that the government was forced in 1863 to reduce the fineness of the silver subsidiary coins from $\frac{900}{1000}$ to $\frac{835}{1000}$. The great

In the course of time, however, this premium would rise higher and higher, since the production of gold cannot go on indefinitely at the rate we may expect to see maintained during the next decade. Those rich supplies which have made possible a new era in the mining of gold cannot, according to the most liberal estimate of their value, hold out for a longer period than forty years, and as the thorough scouring of all parts of the earth progresses, the likelihood that new sources equally rich will be discovered, becomes less. As the diminution in the annual production of gold became more obvious, while the quantity of silver produced remained unchanged, the premium upon gold would rise, and the relative values of the two metals in the open market would fall farther away from the ratios legally established. This rise of gold to a premium would be an inevitable consequence of the general rise in nominal prices of all commodities, which, in whatever indirect, round-about way it might be accomplished, would eventually be manifest everywhere. Now, since under the system of bimetallism assumed to be in operation, gold, because of the greater worth of the quantity of it devoted to industrial purposes, would possess in a higher degree than silver the peculiar properties of a commodity, and since, furthermore, as a result of its going to a

increase in the production of silver brought about later another change of the standard. From this it is clear that the conditions under which the two metals are produced determine their changes in value, even though bimetallism may cause these changes to take place very slowly. But for the discovery of gold in 1848 the premium upon that metal in Paris must have continued gradually to rise.

premium, it would to a certain degree circulate as a commodity even in the form of money, it would, without doubt, have a tendency to follow other commodities in the general rise of prices, and so depart farther from its legally established silver value. The promise of bimetallism, that it would maintain a ratio of 1 : 15½ in the open market, therefore, would not be fulfilled.

One might of course fancy the ratio set up under bimetallism to be one which put so low a valuation on silver that the yearly increase in the quantity of silver coin should at best only equal in value the yearly increase in the quantity of gold coin. It is quite conceivable that under such conditions a preponderance of silver in circulation, and so also the consequent development of a premium on gold, should be avoided for a long time. But when the production of gold began obviously to decline, the ratio of the two metals in circulation would gradually shift more and more to the increase of silver, and then again would develop a widening divergence of the real ratio away from that legally established, which would no longer conform to the changed conditions. Of course the divergence would always remain less than that which might be expected to take place under the first mentioned ratio, but it would still be impossible to set any limits to its possible development. Practically, however, this proposition, for a trial of bimetallism with silver materially lowered in valuation,—say at a ratio of 1:24,—would stand no chance of adoption, because France, and probably also America, in view of the enormous loss which they

would suffer through the lower value of their silver money, would refuse to enter into any such project, and also because it would be impossible to silence the outcry raised by European merchants engaged in export trade with silver standard countries against burdening their commerce by thus forcing down the value of silver so low. Under a regime of bimetallism, to be sure, India would step into line with the double standard countries; but her adherence might in the end prove foreboding for the permanence of the established ratio, since she would draw off each year great quantities of gold which she would permanently absorb,—just as she has hitherto sucked in from year to year million after million of silver rupees.

Genuine orthodox bimetallism, however, does not propose at all to lower the value of silver; it looks rather to the restoration of the French ratio of 1:15½, or at least of the American ratio of 1:16. The six milliards of marks (\$1,500,000,000) of silver coin valued on the basis of the old ratio, and circulating to-day in those countries which are burdened with a halting monetary standard, form the all-powerful argument in support of such restoration. Only in some such solution of the monetary question as this does the agricultural class which advocates bimetallism look to find relief from the distress now oppressing them. Let us for the moment assume, contrary to every probability, that a great bimetallic league embracing England is consummated upon this basis. Would the hopes of the agricultural class be then

justified? I hold any such result to be entirely out of the question. Without doubt silver would come in the course of time to have very nearly its former value in gold, since every bit of it attainable could be offered at the mints of Europe and the United States for coinage at the old ratio. Now I have already shown that an increase in the quantity of money in no way of itself and automatically works upon prices. These hundreds of millions of new silver coins would be much more likely to pile up and lie idle in bank vaults, just as we see the new gold, which has been brought to us in such unusual quantities, now lying idle. Not until a favorable combination of purely economic conditions should cause a quickening of business enterprise and activity would the enormous accumulations of coin cause any considerable expansion of credit and speculation, and therewith a strong general movement of prices upward. The mere rise in price of silver itself, however, would give no sufficient impulse to arouse such a quickening of industry, so long as the conditions of production and of competition remained in other respects throughout the world at large unaltered. No doubt, the exportation of European wares to the United States, and to Mexico, and the South American silver producing countries, would receive a large stimulus; since in exchange for a kilogram of silver twice as much in products of European labor must be given, as is given to-day. But the productive power of European industries is so great that it can satisfy an increase in demand of 300,000,000 to 400,000,000 marks (\$75,000,000 to \$100,000,000) without necessarily caus-

ing thereby any considerable rise in the price of European commodities. We have already seen how little influence the production of gold in the Transvaal, at the rate of 120,000,000 to 130,000,000 marks (\$30,000,000 to \$32,500,000) a year, has exercised in recent times over the European market.

Nevertheless, sooner or later there would be brought about a world-wide conjunction of quickening economic activity, such as last occurred in 1889, and as a consequence of it all there would open an era of extensive investment,—new banks would be erected, new factories laid out, new roads constructed, and withal the abundance of metallic money would now enter in to cause a delusive movement in prices. Naturally, a reaction would not fail to set in; but even after this nominal prices would not fall so low as they had been, but would remain somewhat higher owing to the increased quantity of money forced into the course of business exchanges.

Now would the agricultural class receive any advantage from such developments? If the silver producing countries buy more European commodities at higher prices, that will redound to the advantage, not of agriculture, but of manufactures. So also in the first instance the speculative movement within the country would lead to a quickening in manufacturing industries, and only as an indirect consequence of this quickening would there come about a rise in the prices of certain agricultural products, for example of wool. This agricultural advantage would, however, in all probability be entirely offset by the rise in wages which would inevitably

result from the increased attractiveness of industrial pursuits to the wage earners of the community. Grain, the great agricultural product, would most certainly respond to the general movement of prices least of all commodities, so long as economic conditions throughout the world determining present prices continued to work. The conditions of international competition, the glutting of European markets with grain from over the sea, the advantage which new land of low price and not requiring the use of fertilizers has over old land of high price,—these factors would still have, as they have to-day, an uncontrollable influence over the world's grain market. If eventually a rise in grain prices should come, reckoned in bimetallic money, there would come along with it to the grain producers an offsetting injury, in case, as might be clearly foreseen would happen, prices of other commodities,—necessities of life and the means of production,—and wages, rose higher proportionately.

Many believe that those countries which are to-day upon a paper basis would be enabled through a universal adoption of bimetallism once more to resume specie payments. In this way it is thought the absorption of silver in the business world would be made easier, and more especially that the competition of such countries as Russia and Argentine in agricultural products would be lessened. But these hopes have very little ground to justify them. Bimetallism would not change the economic standing of states relatively to one another, whether they were economically strong or weak. The conditions of production and the financial status of the

countries on a paper basis would not be thereby improved. Since the silver would not come to them gratis, they must procure it through loans, and thus the chief cause of their want of metallic money, namely their international indebtedness, would be aggravated. If, indeed, after they have placed the required loans, their export trade is to be somewhat embarrassed and restricted, as bimetallists expect will happen, the balance of trade must turn against them. Then in place of the former premium upon gold alone, a premium will arise upon both gold and silver. Eventually, therefore, the renewed suspension of specie payments will be inevitable. The outcome would naturally be more favorable if the financial standing and the conditions of general welfare should have essentially improved of themselves within these countries on a paper basis; but in this case the return to a specie currency would be possible, under the present conditions of gold production, on the basis of a gold standard and without the aid of silver. Such an outcome might be looked for in Russia and Austria. But most countries with paper currencies find themselves in economic and financial straits, in which they would be as little able to keep gold and silver together in circulation, as they are to keep gold alone. Especially is this true of Argentine, of whose competition in the wheat market, especially during the last few years, German producers have become very sensible. In any case, the influence of a depreciated paper upon exports should not be overestimated, any more than the effect of the depreciated silver

upon the foreign trade of India. That any such influence, in comparison with the conditions of production and of transportation, is of only secondary significance is clearly shown by the experience of the United States, whose exportation of wheat during the first ten years following the Civil War, in spite of a premium on gold which at times was very great, went on at a moderate average rate, and took its first jump forward in 1879, when the gold premium had finally disappeared.

Among the agricultural classes many of those who advocate bimetallism look to this system for an eventual lightening of mortgage and interest charges. It is hoped that the circumstances in which debtors now find themselves would be considerably improved, since it is believed that prices of agricultural products would rise, while the amount of the debt would remain unaltered. The debtor, it is alleged, is unfairly oppressed through the introduction of the gold standard. This last assertion is, as has just been said, untenable. Then what is often lost sight of should be borne in mind, namely, that the German monetary reform, changing thalers and gulden into marks, accepted the ratio at that time current in the market for the relative value of gold and silver; and that, as has been mentioned above, the quantity of gold and silver money now circulating in Germany is double the amount then in circulation. All this was duly insisted upon in the Silver Commission. It should be further borne in mind that with very few exceptions all existing debt obligations have been created in their present form since the adoption of the gold standard,

while almost all secured loans of long standing, as well as mortgages held by landowners and mortgage banks, have been converted into obligations having a lower rate of interest. Putting aside all these considerations, however, let us return to the question whether farmers are justified in expecting to have their debts lightened in any such way as is above outlined. Plainly such a result would be possible only in case the disposable revenue obtained from the mortgaged property rose in proportion as general prices of commodities rose. But this general rise in prices would affect only gross income. Since the cost of production and of living, as has been already pointed out, would rise more in proportion than the price of the chief agricultural product, namely grain, it is very questionable whether the revenue left over for the payment of interest on debts and of principal would be to any considerable extent increased. On the other hand there would threaten to break out among creditors at large a real, even though wholly unjustifiable panic, which would lead to a widespread foreclosing of mortgages, and to the further embarrassment of debtors, and to the further embarrassment more especially of people in straightened circumstances.

In short a more foolhardy leap into the dark, has never been risked, than would be made in the establishment of bimetallism on the basis of the old ratio. No one can conceive the confusion and disaster which must follow a revolution in prices accompanied by so much giddiness and panic as would certainly be aroused, either at once or in the course of time, by a yearly in-

crease in the quantity of metallic money amounting to from 1,100,000,000 to 1,200,000,000 marks (\$275,000,000 to \$300,000,000). Even during the years from 1850-1870 the quantity of gold and silver money in the world at large was increased at the average rate of not more than about 450,000,000 to 500,000,000 marks (\$112,500,000 to \$125,000,000); such a yearly increment, in connection with the accumulation of gold reserves which have enormously increased since 1850 in comparison with earlier times, is more than sufficient under the present status of population and industrial development to maintain general prices of commodities at their natural height, *i. e.*, at a point determined by the conditions of production. Suppose now, in addition to all this there should be issued throughout the civilized world 600,000,000 to 700,000,000 marks (\$150,000,000 to \$175,000,000) in paper money yearly, or in the course of a decade six to seven milliards (\$1,500,000,000 to \$1,750,000,000)? Every unprejudiced judge would hold this to be an universal inflation of the currency, even if the credit of the emitting states entirely sufficed to keep their paper money at its face value. The coining yearly of 600,000,000 to 700,000,000 marks in silver money would have quite the same economic influence within the several countries and throughout the world, provided the silver were given a certain factitious value through the instrumentality of an international organization. There would eventually develop therefrom a movement of prices not only artificial, but running contrary to the nature of things, the consequences of which would be altogether

incalculable. It would in no way resemble the rise in prices which began with the discovery of gold in California and Australia, and brought up finally in the crisis of 1857. At that time existing circumstances were favorable, and made possible a great universal industrial development, such as in the natural course of events always accompanies a normal rise in prices. At that time industry in all civilized countries was beginning to feel to the full the consequences of a series of new inventions; at that time the world's stock of machines increased day by day, and day by day the net-work of railways grew closer; great banking corporations sprang up, in order to furnish the capital necessary to lure on the adventurous spirit of industrial enterprise freely, and often to mislead it into bypaths fraught with disaster. The discovery of gold did not call forth this activity, but served to accelerate and to further it. When as a result of the discovery of gold prices were brought higher, since this might have happened in any event, the whole process was natural and consistent with actual conditions, so that along the most important lines of production demand outran supply.

How different, however, is the state of things to-day! The industries of all countries stand to-day fully equipped with the mightiest of productive engines; their productive power surpasses demand; hence has come about a war in prices involving the failure of those undertakings on the verge of insolvency, in order that the equality of demand and supply may be once more restored.

Nor are European farmers better off. Formerly they

alone provided for the population of Europe, but now they must withstand the competition of the whole world. It is under conditions such as these that we witness those producers working under the most favorable economic conditions waging war against those less favorably, or even unfavorably, circumstanced. And here it follows naturally that the stronger force out the weaker, and remain masters of the field. One is quite justified in seeking to protect German farmers—who produce under the most unfavorable conditions—from the competition of foreign countries. On the whole, the present straightened circumstances are only transitory in their nature, and in the course of a few decades, owing to increase in population in the new countries across the sea, as well as in Europe itself, the distress will disappear. But international bimetallism is no source of protection or help from which the farmers may hope to get real benefit. It would not in the least lighten the present burden of debt, much less would it remove or lessen the causes which have led to the creation of this indebtedness; it would leave unchanged the relatively advantageous, along with the relatively disadvantageous conditions of competition; it would in no way alter the economic and financial standing of nations; finally, it could not at all materially influence the genuine forces of production and exchange in the civilized world, since its influence must necessarily be a purely formal one.

What then would be the advantage to the farmers if, for instance, the price of wheat in all countries should double, so long as those producing under favorable conditions in

countries over the sea were still in position to underbid German producers in the same proportion as formerly? I have already laid stress upon the fact that the difference in price could play only a comparatively secondary role in this competitive strife, and especially insisted that those financially disordered countries with paper standards would be quite unable to retain a metal currency under bimetallism as well as under the present regime.

Bimetallism, then, would only have this result, that it would make necessary an expenditure each year of 600,000,000 to 700,000,000 marks (\$150,000,000 to \$175,000,000) more for the creation of metallic money, simply to maintain prices nominally higher, the quantity of exchanges effected remaining unaltered.

It is this very increase in the dead weight pressing upon industrial exchanges which would stand in direct opposition to the natural perfection of a monetary system. This perfection of the monetary system involves the dependence of exchanges more and more upon a higher organization of banking functions, and less and less upon metallic money in circulation; and this makes possible a greater and greater economy in the quantity of money required to effect a given number of exchanges at a given range of prices. We see even now that England, which far exceeds all other European states in the amount of business transacted, nevertheless finds sufficient for her purpose an amount of metallic currency much smaller than that which France employs—much smaller even than the amount of Germany's circulation.

We may hope, however, that the perfection of the credit system for facilitating exchanges will in no great time attain in Germany the high development which it has already attained in England. That metallic money will come to perform in large transactions more and more the passive function of a standard of value. As a standard, however, but one only of the precious metals can be used in any one country. Whether some countries upon a lower stage of industrial development will in the future make use of silver for this purpose may yet be uncertain. In the more civilized states of the world, however, gold will undoubtedly remain the standard, even if silver, to a more or less considerable extent, is still retained in circulation in its secondary role as a medium of exchange. England will undoubtedly be guided in its course by its unerring instinct, and will not be won over to the support of any genuine bimetallic system, in spite of all the importunities of her silver friends. Germany, too, it is to be hoped, will refuse to take any such chances as are here involved, which could lead under present circumstances only to a disastrous end.

If now the next generation lives to see the time when the production of gold begins to fall off, that generation will find that it is not the gold standard of the great civilized countries which is threatened thereby, but bimetallism, at last deprived, as it will then be, of all rational grounds of justification. For certainly no bimetallic league would be able in the face of any such protracted discrepancy in the cost of

production of the two precious metals to maintain its legal ratio intact—it would gradually work over to an actual silver standard; while the countries upon a gold standard would have learned to economize in the use of metallic money, through a higher and better organization of their currency, and would in consequence require less and less new gold in order to keep prices at their normal height independently of every eccentric influence which might be exerted upon prices by the medium of circulation.

II.

INDIA AND THE SILVER QUESTION.¹

The results of the experiment undertaken on June 26, 1893, by the British Indian Government cannot yet be fully determined; and it is hardly to be expected that any state will make further movements relative to silver until experience has finally settled whether the Indian mint shall remain permanently closed or not, and, in case it does, at what price a fairly stable equality between the production of silver and its consumption will be reached.

Hitherto the price of silver, though it has fallen greatly, has stood up better than might have been conjectured it would do under the two heavy blows dealt it in the passage of the Indian measure and in the cessation of American silver purchases. Silver of the standard fineness stood in the beginning of 1894 at 31½ pence per ounce; but in the course of January, after the Indian government had determined to sell council bills² at the exchange rate of 15¼ pence per rupee, silver fell to 27 pence per ounce. In April, however, the demand

¹ First printed in the *Neuen Freien Presse*, February 8, 1895.

² The Indian government collects its taxes in silver, and as this silver cannot be used in making foreign payments, the government sells "council bills" in London to raise a quantity of gold sufficient to pay interest charges and other sterling obligations. "Council bills" are government drafts calling for payment in silver rupees; they are bought chiefly by importers of Indian commodities.--Translator.

on the part of China and Japan quickened, and silver worked up again gradually to 29 pence. In August the outbreak of war between these two Eastern-Asiatic empires awakened new hopes that the flow of silver into them might be freer; as a consequence the price of silver was brought by the end of the month to $30\frac{1}{4}$ pence. Since that time, however, the movement of prices has been steadily downward; so that now we find it ranging between $27\frac{1}{4}$ and $27\frac{1}{2}$ pence. The average of the London prices of silver during the year 1894 was $28\frac{15}{16}$ pence, against $35\frac{5}{8}$ pence for 1893, and $39\frac{3}{8}$ pence for 1892.

When one considers, however, that with the cessation of coinage in India and the discontinuance of American purchases, an assured market for from 2,750,000 to 3,000,000 kilos of silver was taken away, one can only wonder that 1894 presents so little contrast with 1893 in the current prices of silver. Even 27 pence, if there were any assurances that this price could be permanently maintained or maintained with only slight fluctuations, must be regarded under the circumstances as very favorable. If this price might be considered finally established some definite grounds would then at last be gained upon which to form an opinion how far silver is still available in the civilized world for monetary purposes. But whether or not this price, in fact, can be permanently maintained, can be best determined from some further observation of developments in the Indian monetary situation. To such an extent has the actual course of events in India proved all theoretical

suppositions ungrounded and fallacious, that one is forced to look to further experience alone for instruction.

The Indian government resolved upon the measure passed in 1893 in the hope that the value of the rupee might thereby be made independent of the price of silver, and in the further hope that that value might be held at 16 pence, or at the best fall no lower. And this hope in itself was not at all unwarranted. Austro-Hungary succeeded in bringing the exchange value of the coined gulden 25 per cent. and more above its bullion value, solely by stopping the coinage of silver for private individuals. The English, to be sure, misconceived the theory of the case. They believed that a rise in the value of the rupee would be brought about as a consequence either of the increased scarcity of the coin, or through an increase in its purchasing power within the country; while as a matter of fact it was only a question of influencing rates of exchange between England and India.

The balance of trade is always strongly in favor of England, and against India. Even the 16,000,000 or 17,000,000 pounds sterling which India has to pay yearly in interest charges, pensions, and other obligations, with the government bills of exchange employed in making these payments, do not measure this balance. There must be added various sums besides. For example, in 1892 there was shipped to India 9,500,000 pounds sterling in silver—an amount of silver very nearly equal to the amount coined in India during that year.

It seemed therefore quite reasonable to suppose that the council bills and general exchanges on India would easily rise again to 16 pence, the rate current in 1892, if they could be freed from the competition of this imported silver, which in India could be changed without loss,—except for the payment of a trifling tax,—into legal tender coin. A difference between the mint value of the rupee and the market value of silver has, indeed, established itself since the adoption of the measure; but the rate of exchange for the rupee has not yet come to be quite independent of the market value of silver,—the rupee rather tends to follow silver and to depreciate with it. For several months the Indian government attempted by holding back council bills in London to keep the rate of exchange at least up to $15\frac{1}{4}$ pence, but was finally forced to yield this point because of its financial embarrassment which continued to grow more and more pressing. As a consequence the rupee fluctuates to-day between $12\frac{3}{4}$ and 13 pence. The current price of silver, however, $27\frac{1}{4}$ to $27\frac{1}{2}$ pence, would naturally make the rupee worth $10\frac{5}{8}$ pence; so that the rupee has actually been raised in value more than 20 per cent. above its bullion worth. Moreover, in the new fiscal year, begun on the first of April, 1894, so considerable a quantity of government exchanges have been disposed of without difficulty at a rate of something more than 13 pence on the average, that in all likelihood by the end of March the entire amount of 16,000,000 pounds due from India will be taken up. With the decline in the rate, however, the deficit in the Indian budget,—which is

reckoned in rupees,—has still further increased and stands as compared with the year 1892–93 in the proportion of 15:13. So that the real object sought in stopping the coinage of silver has not yet been gained.

Now how is this depreciation of the rupee explicable, in face of an export of goods out of India in the year 1893–94 which exceeded imports by 325,000,000 rupees (approximately \$82,000,000)? During the current year¹ the balance of trade has been still more favorable; so that the excess of commodities exported ought by the end of March to equal more than 400,000,000 marks (\$100,000,000)—aside from the very considerable amount of gold exported from India. On the other hand, there was shipped to India out of England alone, silver to the amount of £5,934,000; and while this sum is not a little less than that shown in the corresponding figures for the year previous (£8,697,000), it should be observed that the amount of silver shipped in 1894 would have been worth £7,000,000 if prices had remained on the average as high as they averaged in 1893, and also that this export in 1894 was only 20 per cent. less quantitatively than in the year previous. This again is a result quite unexpected. During the months immediately following the close of the mint, silver continued to flow into India in undiminished quantities. Some explanation of this continued flow was looked for, partly in the coinage of silver kept up in vassal states, and partly in the assumption that there was in the community no clear understanding what the significance of

¹ 1894–95.—Translator.

the new measure was, and that people, therefore, believed they were doing a good stroke of business when they purchased bar silver at the price demanded in rupees. Now, however, more than a year and a half after the discontinuance of coinage, the absorptive powers of India for silver have shown themselves to be very great; so that it appears quite manifest that this metal is hoarded and regarded by the people of India now, as it has always been regarded, as a treasure metal. Formerly silver was hoarded for the most part in the form of rupees, and hence it came about that the purchasing power of this coin within the country was only slightly lowered, in spite of the very great quantities of rupees coined each year. Now bar silver and gross silver ornaments are preferably chosen for purposes of hoarding, because of their lower value. Therefore, silver has not ceased to enter into the foreign exchange as a competing metal. It remains to-day as it was formerly, the real medium of trade. Even though silver is no longer legally convertible into coin, and though consequently it is worth less as bullion than it is as coin, it nevertheless remains in India a commodity especially sought after, and one which may be disposed of there with peculiar readiness. And the strong pressure of silver offered in the London market will always force down the rate of exchange, since it will always be better worth while to send silver than to buy bills, when Indian exchanges rise to a certain point in England.

It now remains to be seen whether the people of India, numbering some 300,000,000 souls, will permanently

manifest in this manner their predilection for silver. In view of the great tenacity with which this people hold to their customs and prejudices, an affirmative answer to this question seems in no way unjustifiable. Not only, then, does British India offer for the future an apparently assured market for some 1,500,000 kilograms of silver, but further than this the danger that India will soon absorb great quantities of gold in place of the silver hitherto demanded, is also set aside. If the Indian decree, passed on June 26, 1893, had worked itself out according to the expectations of its originators, the danger just mentioned would in that case have become quickly a very real one, and England, more than any other country, would have felt keenly the sharper competition of the East for gold. As a matter of fact, however, the opposite of what was expected has taken place up to the present time, and it appears even that India has, to a certain extent, given out gold in exchange for silver. At all events the export of gold out of India has very considerably increased, since England in 1894 drew from India more gold than she drew from the United States, namely, not less than £3,381,000, as against £1,190,000 in 1893.

In her Indo-Chinese possessions England will maintain the silver standard intact. The mint at Bombay is about to begin the coinage of a silver dollar similar to the Japanese *yen*, and it is hoped that this coin will find its way also into other parts of Eastern Asia as trade money. Japan after the successful ending of the war will perhaps make an attempt to introduce the gold standard. China, on the other hand, one may confi-

dently assume, will remain in the silver ranks. So that the export of silver into this country bids fair under the low prices current to be greater in the future than it has been hitherto. In 1894 England alone exported to China £3,151,000 in silver, amounting in weight to 700,000 kilograms. It is then quite possible that so long as present conditions last, 2,000,000 kilograms of silver a year will be regularly taken up in eastern Asia. The industrial consumption of silver in Europe and America, moreover, under the very low prices current to-day may be raised to 1,000,000 kilograms, and even increase beyond this amount. Add to this, further, the money coined in Mexico and the other American silver standard states for their own use, together with the coinage of subsidiary silver money in all countries, and it seems not improbable that 3,500,000 kilograms of silver may be produced each year and find a ready market at 27 pence per ounce.

This is approximately the amount produced in 1888, and it is 1,500,000 kilograms less than the maximum production which took place in 1893. The decline in production which took place in 1894 is not accurately known in figures¹; but in any case it was not sufficient

¹According to Valentine's estimate the silver production of the United States fell in 1894 to 45,600,000 ounces, as against 52,000,000 ounces in 1893.

[The figures of the total production of silver and of that in the United States for 1893, 1894, and 1895 are given as follows by the Director of the Mint :

	TOTAL PRODUCT.	U. S. PRODUCT.
1893	166,092,047 ounces	60,000,000 ounces
1894	167,752,561 "	49,500,000 "
1895	174,796,875 " (estimated)	55,727,000 "

—TRANSLATOR.]

to bring about an equilibrium of production and consumption.

Such an equilibrium will, however, be more nearly realized when the prospect of a rise in prices vanishes. Then mine owners, especially in the United States, who have, hitherto, been looking for some favorable turn of the market, will be forced to shut down.

III.

INTERNATIONAL BIMETALLISM ONCE MORE.

Upon the foregoing article and upon my position with reference to the monetary situation in general, Dr. Arendt has published an attack in a number of the *Deutsches Wochenblatt* dated February 21, 1895. To this attack I wish here briefly to reply.

Dr. Arendt directs his attention first against an observation made incidentally in the above publication, that the "currency question" with which America is occupied to-day is only remotely connected with the question of a standard as Europeans understand the latter question. I intimated that the "currency" question concerned chiefly the securing of paper money issued by the general government and the contraction of that currency along with a reform in bank-note issues. Quite the contrary, believes Dr. Arendt. All difficulties in America, he thinks, have sprung out of the problem of the standard, since gold has found its way into European banks and the supply of it is now exhausted. Personally, however, I have only wished to insist that one should not confuse the terms "currency" and "standard of value," as one finds them confused throughout the German press. For instance, one finds the draft of a "currency" law, which President Cleveland recommended to Congress, designated a "plan to regulate the standard." It had to do actually only with the bank-note

issues and the greenbacks; proposing a reform of the national bank issues, and a simultaneous contraction of the greenback circulation. The question whether such a law should be passed or not really did not at all involve the question whether gold should be made a standard, or the two metals together.

In making the statement criticized, I did not have generally in mind the financial embarrassments which have grown up in the United States out of a diminution in the treasury's gold reserve. These embarrassments are undoubtedly brought about by a complexity of causes,—chiefly by the inexcusably bad monetary policy of the United States, by the inflationist insistence upon a retention in circulation of \$346,000,000 in United States legal tender notes, by the passage of the Bland Bill and of the Sherman Bill. Not as Dr. Arendt believes, by the insufficiency of the gold reserve. If America would promise to pay interest and principal in gold, she might draw from Europe \$100,000,000 in gold at 3 per cent., without encountering any opposition on the part of the three great central banks, since these banks have now lying in their vaults 3,100,000,000 marks (\$775,000,000) in gold. Moreover the flow of gold out of America in 1894 was much less than it was during the year previous; and since the gold reserve in the Treasury continued to sink dangerously low even after the placing of two loans for \$50,000,000 each, it is evident that the chief cause of this decline lay in the distrust felt throughout the community generally of the silver party and of the "free coinage" advocated by that party.

The gold given out in redemption of the paper money presented did not for the most part find its way into banks, but rather into the money boxes of the more prudent and circumspect members of the community.

Dr. Arendt brings forward in support of his scarcity-of-gold theory, the further argument that if silver has actually depreciated, then European banks must add to their note circulation the amount of their silver coin as a liability. He makes this contention on the ground that a holding of coin depending for its value upon the credit of the government and depreciated to the extent of 50 to 60 per cent. is no security for a bank note circulation.

At the present time, however, even government paper, such as the imperial treasury notes of Germany—a form of money intrinsically worthless—is held in reserve as security against notes in circulation. Neither the Imperial Bank of Germany, nor the Bank of France, are legally state institutions. For them, silver money has the same value which it enjoys in the ordinary course of business, a value dependent upon the credit of the government. Hitherto, the silver in circulation has been at a parity with gold, and will remain so in times of usual quiet,—provided the quantity of silver in circulation is not unduely increased—even though the price of silver falls to 10 pence, or lower, per ounce. In event of a disastrous war, of course, silver might depreciate in terms of gold. The amount of this depreciation, however, would not depend upon the low intrinsic value of the silver, but, as in the case of paper money, entirely

upon the credit of the government. Indeed, only the experience of an all-destructive catastrophe, (assuming no increase in the amount of silver money in circulation) could send gold to a premium of 100 per cent., while silver itself fell to one-half its original value in terms of gold. In any such most calamitous event, moreover, paper would undoubtedly be made legal tender and forced into circulation; so that the silver currency would be worth at least as much as the paper. For the rest, I am heartily in favor of a recoinage of silver which shall lessen the overvaluation of silver money by a change of the mint ratio.

The silver held by the banks need not, however, be regarded as security, for the simple gold reserve of itself alone, both in the Imperial Bank of Germany and in the Bank of France, has been shown above to be more than sufficient. In the Imperial Bank of Germany it equals $\frac{7}{11}$ of the note circulation, and in the Bank of France $\frac{21}{36}$, while formerly a reserve of one-third the note circulation was thought sufficient.

Again, I have spoken of a "natural" price with reference to silver; and further of the possibility that silver may, through a re-establishment at some time in the future of an equality between its lessened consumption and its lessened production, come again to have a comparatively fixed "natural" price, say of 27 pence per ounce. To all this Dr. Arendt makes great exceptions. There is, he believes, no other guarantee against tremendous fluctuations in the price of silver than that found in the provision made under a double standard

for a parity of exchange of the two metals. By the term "natural" price, when that term is applied to silver, I personally understand what the term signifies when applied to iron or copper; namely, that price which results from customary conditions of production and consumption without the aid of an artificially established legal valuation in terms of gold, and also certainly without any sudden and great annihilation of the existing demand. No such constriction in the consumption of silver as has already resulted, from the closing of the Indian mint and from the discontinuance of American silver purchases, is at present at all likely to take place from any further legislative action; for neither China nor Mexico are in a position to adopt a gold standard. Therefore the conditions exist for a natural determination of the price of silver. Under these conditions that price certainly will not rise much above 30 pence; that it may not fall below 27 pence, however, I have never contended. Rather I have put aside all prophesying and have preferred to await further developments in India. Assuming that India really continues to demand bar silver at the rate she has hitherto done—although this would seem to me very remarkable—I believe it altogether probable that the price of silver would not actually rise above 30 nor fall below 25 pence, in the absence of further legislative action. Should bimetallism, contrary to every probability, win the day, naturally the price of silver would rise directly to 60 pence; but in that event production would take place under quite altered conditions. Here I entirely dissent from Dr. Arendt's purely

subjective opposing views, and elsewhere I have given the grounds for my dissent.

Above all Dr. Arendt accuses me with having from time to time completely changed my views on the question of a monetary standard,—a course of action which he thinks is not likely to increase that respect for the precepts of objective science peculiar to Germans. I was at first a pronounced advocate of the gold standard; then I became just as pronounced an advocate of bimetallism; then a bimetallist only “in principle”; I have since tried every variety of opinion, and may just now be set down as a gold standard man. In no great while, however, I shall become once more a pronounced bimetallist. The explanation lies in the view which I take of the monetary problem; I hold that problem to be preponderatingly statistical in its nature, and dependent upon the arbitrement of figures, especially the figures of production. Looking at the matter as I do, I am able not only to assent to this last accusation, but I must even regard it as complimentary. I have always considered Political Economy a purely experimental science, in which matters of fact alone have a finally determining influence, and in which the theory supplies only an abstract synthetic generalization of observed phenomena. At the time of the German monetary reform and solely with reference to Germany, I strongly favored the adoption of a gold standard; but I have never allowed my fancy to revel in the conception of a world-wide adoption of the gold standard. Rather in 1873, even before the promulgation of the currency law

of that year, I publicly declared the fears which I then entertained with reference to the depreciation of silver which might follow the supplanting of that metal at the mint. As these fears were confirmed by the course of events before the end of the year, I began then to interest myself theoretically in the idea of an international double standard. The idea had been familiar to me some time previous to Cernuschi's earliest publications. If I mistake not, I had first become familiar with it through the operations of Dutch Monetary Commission in 1872. I am forced to believe that Dr. Arendt, who is in a way a student of mine, first had his attention called to bimetallism by me. He is able also to bear me witness that at the time when he read to me the manuscript of his book on an international double standard, I observed throughout an unequivocally sceptical reserve, and in particular that I would not at all consider the proposition that Germany alone should adopt a bimetallic system,—a proposition which for that matter Dr. Arendt did not himself favor in this his first publication. In my "Discussions of the Monetary Problem" (*"Erörterungen über die Währungsfrage"*), 1881, I first took up the bimetallic line of argument, and there followed it out further than I have done in any other place. Nevertheless, even there I confined myself to a practical consideration of the question, whether bimetallism would be an altogether irrational proposition under the supposition made. Irrational, that is, "provided the Imperial (German) Government, while it did not actively proceed with the reëstablishment of the double standard,

nevertheless gave assurance to those states for which this reëstablishment was a matter of *very pressing interest* at the time, or destined in the near future to become so, and particularly to France,—that for itself it had no intention of taking any financial advantage of other states which might make an attempt to introduce bimetallism, nor any intention of embarrassing such an attempt through a resumption of the sales of silver; and the further assurance that it would on the other hand favor any such attempt, and would, *in case these countries should resume the coinage of silver*, engage definitely to retain the silver money then current within the country. It would be more conformable to the further progress and positive realization of the monetary reform undertaken, if thalers might be recoined into four-mark pieces of full legal face value under the ratio of $1 : 15\frac{1}{2}$." At the bimetallic congress held at Cologne, 1882, I next advocated some such restricted coöperation of Germany, but only on the condition that England should adopt similar measures. At the same time I declared it to be in the highest degree improbable that England should join any federation of states for the maintenance of the double standard; and on the other hand I spoke outright against any action on the part of Germany unsupported by England.

Theoretically I have always been of the opinion that an universal adoption of bimetallism might exercise a very far reaching influence in maintaining gold and silver with some degree of permanency at a fixed parity. No system of bimetallism, however, could neutralize in-

definitely great changes in the amount of the two metals produced. The experience of the twelve years from 1848 to 1859 proves this to be true. During this period the price of silver in London rose from 59½ pence to 62 $\frac{1}{16}$ pence, or 4.3 per cent., and that, too, although the French double standard was at the time in full operation, and working to keep the two metals relatively to one another unchanged in value. The rise in the price of silver was due solely to the increased production of gold. But for the working of the French double standard the rise in price might have amounted perhaps to 10 per cent. or even more. The double standard, however, could only work to prolong the period required for the change in values to become manifest, it could not prevent the change from eventually taking place; and if in the sixties the great development in American silver mining had not occurred, the premium on silver in Paris would have risen higher and higher. Dr. Arendt will not care to maintain, however, that any such change in the production of the two precious metals will take place in the future, as occurred twice in the period from 1848 to 1870,—both times by good fortune advantageously for the further maintenance of the French ratio; since he assumes that a lasting and real decline in the production of gold will appear in the course of a few decades.

The figures stating the production of gold and silver year by year down to 1881, were such that a permanent re-establishment, through a general bimetallic league, of the gold ratio, appeared theoretically to be quite possible, provided these figures—for 1881, 450,000,000 marks

(\$112,500,000) for gold, and 466,000,000 marks (\$116,500,000) for silver according to its former value—should not too greatly change. The great Comstock silver veins in Nevada were almost completely worked out, and it seemed improbable that any further increase in the production of silver should take place; rather it seemed probable that a lessening of that production might be experienced. That was a misconception which I have had to correct from the subsequent course of events. So far as concerned my position with regard to practical bimetallism this error was of no consequence, since I had made no other proposition than that Germany should retain her silver thalers; and this I still favor, of course on condition that the silver be recoinced according to a better standard.

With the unremitting increase in the production of silver it soon became evident to me that the ratio of $1:15\frac{1}{2}$ could not be permanently maintained through the agency of any bimetallic league, however great. In 1882, therefore, I put forward the ratio $1:18$ (see my account in Schmoller's *Jahrbuch* of the congress held at Cologne), and in the following year, thinking this ratio probably too visionary, I set it lower still. That, however, was not in any sense at all a constant shifting of my point of view. New conditions demanded that a new answer be made to the old question: "Under the present conditions of production of the two precious metals, what ratio can be approximately maintained by a bimetallic federation?" Since I believed experience taught that the influence which conditions

of production have over values is only lessened and protracted, not annulled, through the working of the double standard system, it followed as a matter of course that I must set the value of silver relatively to gold year by year lower as the production of silver increased. At the same time the question naturally became more and more theoretical, and the possibility of making a practical trial of bimetallism grew less and less.

Already in 1882, I had pointed out the improbability of an international combination being consummated, and in the years following I insisted upon this improbability more and more strenuously. More especially I declared with absolute assurance that England would never enter into a bimetallic system which should undertake to maintain the old ratio. Naturally, I could not foresee that the production of silver would reach the colossal sum which it actually attained in 1893. I did not, however, deny the possibility of its doing so. Dr. Arendt, on the other hand, continually prophesied the end of this increased silver producing, and in 1886 considered a production of 600,000,000 marks (\$150,000,000) reckoning silver at its former value, the extreme maximum conceivable. As a matter of fact, however, it rose in 1893 to 900,000,000 marks (\$225,000,000), and would have risen to 1,000,000,000 marks (\$250,000,000), if silver had been brought back to its former value.

In opposition to those monometallists who, on theoretical grounds, consider bimetallism a pure madness, I have always felt disposed myself theoretically to favor the system. I have, however, never been a "pro-

nounced " bimetallist, as regards the practical adoption of that system, since I have never advocated Germany's taking the initiative in that adoption, nor recommended that Germany should on general principles give up her gold standard. On the contrary, I have always declared that the other states had all of them a greater interest in the question than had Germany, and I have always insisted that Germany should do nothing without England. I have, however, from the beginning entirely dissented even theoretically from a certain opinion of vital significance which has come to have a widespread acceptance among bimetallists. Though I have been willing to grant that there might come about in the future a dearth of gold, and in general that there might not be at hand a quantity of gold sufficient to make possible the introduction of the gold standard in all lands throughout the world, I have, nevertheless, everywhere emphatically denied that the decline in general prices of commodities, which has taken place since 1874, is due to an appreciation of gold alleged to be actually existing and increasing. Dr. Arendt also opposed this view for a long time. He first unequivocally espoused the notion that there already existed an appreciation of gold, at the time when the production of gold began once more to revive and went on increasing year by year.

Dr. Arendt quite deceives himself if he believes that I shall turn bimetallist again. I have nothing to say against the proposition that Germany in agreement with other states make certain concessions to silver, but I shall never favor the entrance of the German Empire

into a purely bimetallic league. Such a step I have never in general regarded permissible except on the assumption of conditions which cannot in fact be realized. It is, however, quite conceivable that I may again say some time: "Under the present conditions of production a bimetallic league might be able to re-establish a ratio of 1:15½." If for example the production of silver should not rise above 900,000,000 marks (\$225,000,000) in spite of the reestablishment of the old ratio, while the production of gold rose to the neighborhood of 1,000,000,000 (\$225,000,000), then perhaps the necessary conditions would be fulfilled, and the above proposition theoretically justified. I should not, however, even then favor the positive realization of bi-metallism, since under these conditions such a system would lead to an irremediable inflation, and would permanently burden the community with a great surplus increase in the medium of exchange in itself unnecessary and pernicious. Meanwhile, the above suppositions are on both sides in the highest degree improbable. More especially the production of gold could rise to such a height only very temporarily—a statement Dr. Arendt will be the last person to deny.

If, now, all rational probabilities to the contrary notwithstanding, a bimetallic league comprising Germany should be consummated, the observation of the important consequences which might then be expected to follow would be for me a matter of highest scientific interest. New enactments, the unwise in a higher degree perhaps than the wise, in Political Economy take

the place of experiments, and science is bound to make the greatest possible use of such opportunities, in order to induce new propositions concerning the interdependence of scientific phenomena. An experiment in bi-metallism, however, would surely be a vivisection performed on the body politic, which might prove to be ominous in its consequences throughout the whole social organism. Therefore, putting aside all the scientific interests involved, out of consideration for the general welfare, I feel it necessary most earnestly to give warning before the experiment is undertaken. In foolhardy temerity such an experiment would hardly find its parallel.

THE STREET RAILWAY PROBLEM
IN CLEVELAND

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NOTE.

ALTHOUGH Mr. Hopkins' study of the street railway situation in Cleveland dwells on some details which will be of immediate interest to citizens of that municipality only, his careful and judicial investigation has been thought by the Publication Committee to deserve the attention of a wider circle of readers, as an example of the method and spirit with which this important problem should be approached.

THE STREET RAILWAY PROBLEM IN CLEVELAND.

I. INTRODUCTION.

Of all the municipal problems which in recent years have commanded attention, there is perhaps none which has appealed more strongly or directly to the average citizen than that of the relation of his city to its street railways. As an individual he is dependent upon the street railway for convenient and rapid transit from one part of the city to another; the character and cost of this service are of considerable importance to him. As a citizen, he is a member of a corporation which has a large interest in the enterprise, and which is subject to powerful influences brought to bear upon it by the corporations to which it has granted street railway privileges. His interests, private and public, are involved in the determination of the attitude of the city towards these corporations. On general principles, therefore, a study of the street railway problem in any city is always in order, and, if thoroughly prosecuted, should be of some value.

In addition to these general reasons, the existing situation in the city of Cleveland furnishes special reasons for such a study. The city, through its council, has been put in a position where it must act upon the

question of its relation to its street railways as a whole. It will doubtless be called upon within a short time to settle the whole problem for a long time to come. The last Legislature, under great pressure brought to bear by a powerful lobby, passed a bill authorizing city councils to extend all existing street railway grants for a period of fifty years from the passage of the act. The statutory limit of these grants has hitherto been twenty-five years, and so remains, with the exception of lines consolidating under the act just mentioned. It is therefore within the power of the council of an Ohio city to authorize at one stroke the consolidation of all the lines of the city, and to give to the consolidated company exclusive control of the street railway business of the city for two generations. The immediate prospect of such a grant gives special pertinence and value to any study which may throw light upon the question of the proper attitude of the city towards its street railway lines.

It goes without saying that such a problem can be successfully attacked only in the light of facts. The value of franchises, the possibility of lower fares or better service, the advisability of city ownership,—these and all kindred questions can be answered intelligently only in the light of the results already attained. We must know at least the main facts before we can venture any opinion as to the proper solution of the problem as a whole. But these facts are most assiduously concealed. The companies exert great care to prevent them from coming to the public knowledge. In the absence of reliable data, we are generally forced to reach con-

clusions by comparisons and conjecture. And as a matter of fact the arguments commonly made upon the situation in Cleveland are derived from the experience of certain British cities, notably Glasgow. But the situation in these cities is so utterly different from that of Cleveland that comparisons drawn from them are inevitably misleading. Glasgow, for instance, has about three times as many people as Cleveland, within an area about one-third as large. The difference in amounts of capital invested, mileage, density of population, length of hauls, cost of labor, and local conditions generally, render comparison practically valueless. The problem must be solved by each city for itself on the basis of its own peculiar conditions. And until we have exact, reliable data upon which to determine the value of franchises, we cannot decide either what the city should demand or the railway company concede.

It will therefore be our purpose to indicate, as fully as seems necessary and is possible, the conditions now existing. We shall give in brief the history of street railway development in Cleveland, the methods of granting franchises, with their limitations, statutory and municipal, conditions imposed and compensation exacted. We shall describe the consolidations of the various companies now holding franchises, and the results thereof. Having given the status of existing grants, we shall give the amounts of capital stock, investment, bonded indebtedness, and earnings of present lines, in order that we may show the approximate value of existing franchises on the basis of these figures. We shall further

show what the cost of replacing existing lines would be in the event of an award to a new company; and the value of the franchises under these conditions. These data given, we shall proceed to a discussion of the different methods which the city may adopt in its treatment of street railways, noting the bearing of each method upon the principal phases of the problem; and finally, outlining what seems to be the best policy for the city to pursue.

It will doubtless be felt that the scope of this paper is exceedingly narrow; that more light might have been thrown upon the situation in other cities. The force of this criticism is freely admitted. The one answer is, that it has been found exceedingly difficult to get at the real facts in this one place, under circumstances rather favorable than otherwise. To reach a conclusion on the situation in other cities, a similar inquiry as to complicated facts must be made. During this investigation the writer has accumulated a considerable mass of useful information concerning street railways at home and abroad; but very little of it could have been safely applied to generalization upon the situation here or elsewhere. The aim has been simply to get as near the truth as possible in this one case; an endeavor which may at least indicate some of the methods whereby the same thing may be done elsewhere.

II. HISTORICAL SKETCH.

The history of street railways in Cleveland falls naturally into three well defined periods. The first, including the fifteen years from 1859 to 1875, may be called the Period of Original Grants. During these years every one of the franchises now in force was originally granted. In 1859, the East Cleveland¹ and Kinsman Street (now Woodland Ave.) lines were authorized by resolution of Council. In 1863 the West Side and the St. Clair Street lines received their grants by ordinance. The Garden Street franchise (now Central Ave.) of the East Cleveland Company, dates from 1868; that of the Brooklyn line from 1869; the Broadway & Newburgh from 1873; the Superior Street and the South Side from 1874. Since June 16, 1874, when the last named company received its grant, no original grant has been made in Cleveland.

The second period, 1874 to 1889, may be called the Period of Renewals and Extensions.² During this period all of the original grants were renewed, one of them twice. In 1879 the first of the original grants,—the East Cleveland and the Kinsman Street (Woodland Ave.),—were renewed for twenty-five years. In 1880 the Garden Street (Central Ave.) was extended and renewed. In 1882 the West Side franchise was renewed for twenty-five years from February 10, 1883, the date of expiration of the original grant. In 1885 the St. Clair

¹ What is now the Euclid Avenue Line.

² For grants in detail, see Appendix C. For location of grants as indicated in Appendix C, see map.

Street grant, which had already been renewed in 1869 for twenty years, was renewed a second time for twenty-five years. The Brooklyn and Superior grants were also renewed during the same year. The East Cleveland in 1888 received its second renewal, while the South Side received its first. In 1889 the Broadway & Newburgh received the last renewal granted, completing the list. During this same period numerous important extensions were granted. The East Cleveland Company was granted its Cedar Avenue and Wade Park extensions. The Brooklyn line was extended from lower Superior Street out to Woodland Cemetery by way of Scoville Avenue. The Superior Street Company received its Payne Avenue grant. The Broadway & Newburgh obtained its Belt Line franchise. The West Side Company was granted its Detroit Street and Lorain Street extensions. In addition to these important grants, numerous minor extensions were granted to all the companies. This period may therefore be fairly designated the Period of Renewals and Extensions.

The period from 1889 to the present time may be designated as the Period of Consolidation. The year 1889 witnessed the general introduction of rapid transit by cable or electricity, which in turn brought in a general movement for consolidation on a large scale. The situation and relation of the lines in Cleveland (see map) has always been extremely favorable to consolidation; and there had been a fairly well defined movement in that direction as early as 1885, when the Woodland Avenue and West Side Companies consolidated, by

permission of the Council. In 1889 three immediately parallel lines,—the St. Clair, Superior, and Payne Avenue,—owned by the Superior and St. Clair Street Companies, were consolidated under the name of the Cleveland City Railway Company, and with a view to the use of the cable as motive power. The Brooklyn and the South Side lines had already come under the same ownership, and were practically, though not formally, consolidated. Also the East Cleveland Company, with its Garden street (Central Avenue) branch and its Cedar Avenue and Wade Park extensions, was availing itself of the advantages of consolidation by operating parallel lines. The net result was that the nine original grants with their important extensions were in the hands of five companies. But it was not until May, 1893, that the large consolidations were effected. The result of these was to bring all the lines under two consolidated companies, the Cleveland Electric Railway Company,—including the East Cleveland lines, the Johnson lines (South Side and Brooklyn) and the Broadway lines,—and the Cleveland City Railway Company, including the Cleveland City Cable Company's lines and those of the Woodland Avenue & West Side Company. The consolidation movement can go but one step farther,—to the consolidation of the two great consolidated companies; and that step has been legally provided for, and partially accomplished. This period of consolidations has been marked by a notable improvement in the service rendered. It may fairly be doubted whether any city in the United States has, on the whole, better street

railway service than that which has been furnished by the two consolidated companies of Cleveland. In fact, the service now rendered could be only very slightly improved by any further consolidation.

One other characteristic of this last period should be noted,—the development of suburban railway connections. Six of these suburban lines have received their franchises, and four of them are in actual operation. The Cleveland, Painesville & Eastern, and the Akron, Bedford & Cleveland lines, having a mileage of thirty miles each, connect with the Euclid Avenue and Broadway lines respectively, of the Cleveland Electric Railway Company. The others all connect with the Cleveland City Railway Company's lines. The Cleveland & Elyria, with twenty miles, comes next in size, and connects with the Lorain Street line. The Cleveland & Berea, with eleven miles, connects with the same line; while the Lorain & Cleveland, nineteen miles, to connect with the Detroit Street line, and the Cleveland & Chagrin Falls line, fourteen miles, to connect with the Kinsman Street line, are not as yet completed. By this system of suburban lines, the city lines reach out to the most important towns within a radius of thirty miles. These lines though at present under distinct companies, are feeders to the city lines, and necessarily under the influence of the city companies.

The total result therefore of our street railway development thus far has been to expand nine original horse-car lines into a great electric and cable system covering the whole city and reaching out into the surrounding

towns. And a part of this general result has been to put this system into the hands of two consolidated companies, which, in turn, promise shortly to be united into one. Having thus outlined the growth of the system, we shall proceed to note the part which the city has played in it, the privileges it has granted, the restrictions it has imposed, the returns it has received.

III. THE ATTITUDE OF THE CITY TOWARDS THE STREET RAILWAY COMPANIES.

During the first thirty years of its history, the street railway problem in Cleveland was for the most part comparatively simple. The desideratum was, cheap and convenient transit from one part of the city to another. The problem was, how much the city ought to grant, by way of special privileges to the persons or companies who would undertake to render such a service for a population loosely scattered over a wide area. And these privileges, when properly granted, were generally regarded, not as favors bestowed upon the parties receiving them, but as concessions which would enable them to render the service which the city required.

The period beginning with 1889 has, however, witnessed a wonderful development in our street railway systems. The primitive horse-car has given way to the electric motor or cable car. Mechanical skill and genius of the highest order had been applied to systems and methods; and with these has come that more perfect organization which is their usual accompaniment. Capitalization has increased by leaps and bounds, and companies large in themselves have been swallowed up by still larger corporations. While the cost of operation has decreased, the volume of business has largely increased, and property of doubtful value under the old régime has become 'gilt-edged' under the new.

With this development has come what is now commonly regarded as the most important phase of the

street railway problem. The privileges which were in the first instance regarded as necessary concessions to companies rendering good service have now become so valuable as to produce a large and constantly increasing revenue, after good service has been rendered and a generous return made in interest on the capital invested. The profits in excess of a fair return on the capital invested have been concealed by means of largely watered stock. These profits have been capitalized for the benefit of the promoters of the companies, so that a large part of the capital stock of these corporations consists of franchises for which they have paid nothing. Moreover, these franchises are steadily increasing in value. The growth of population and the still greater increase in per-capita travel, promise a prospective value far greater than that of the present. In view of this greatly increased present value, and of the far greater prospective value of franchises, the problem has become, not simply how to get good street railway service, but also *how to obtain a fair return for the valuable privileges granted* to the companies rendering that service. The people are therefore demanding that the recipients of these grants in the future shall pay for them according to their real value. This demand as yet has been ineffectual. It cannot be said that the attitude of the city Council has indicated a recognition of this right to a fair return for franchises; but such recognition will doubtless be forced by the strong popular demand for it.

With this great increase in the value of franchises has arisen a fact which may contain a problem more serious

than either of those already mentioned. The fact is, the corruption which easily arises in connection with the granting of these privileges; and the problem is, how that danger of corruption may be reduced to a minimum. The great value of franchises naturally furnishes to the companies a constant temptation to exert undue influence upon our city government. They are always in a position to 'grease' the party 'machines' to their own profit. The results of this undue influence may appear in the selection of city officials, in the acts of these officials, and in their failure to exact the fulfillment of obligations properly resting upon the companies. The power of these corporations,—for years considerable,—has been greatly increased by the increased value of their franchises. It has come to be believed that the value of these franchises is so great as to furnish an immense corruption fund, and still leave large profits to the company obtaining them. And it has come to be believed, further, that the power thus placed in the hands of the companies has actually been used to obtain, by unlawful means and without compensation, privileges of great value. Moreover, the temptation to the companies and the danger to the public have been greatly increased by the passage of the law¹ already referred to, which puts into the hands of fifteen councilmen the power to give away under any conditions, or under no conditions worth mentioning, all the franchises in Cleveland for fifty years to come. This law was pushed through the Legislature by a strong lobby, despite all

¹ Rev. Stat., Sections 2505 a, 2505 b, 2505 d, passed April 22, 1896. See Appendix B, pp. 359-61.

protests, at a very great expense to somebody. It has opened the door to wholesale and gigantic corruption in the Council, a body which, during the last ten years, has granted everything within its power to the companies and obtained nothing for the people. The problem of how to reduce to a minimum the danger of corruption in the award of these privileges, is, therefore, serious and pressing.

We have before us, then, three elements in the street railway problem of Cleveland, which should determine the attitude of the city toward the street railway companies :

1. Good Service for the public, in the form of cheap, rapid, and convenient transit to all parts of the city.
2. A Fair Return to the city for the privileges granted to street railway companies.
3. The Elimination of Corruption from the award of franchises.

We believe that these three points furnish a very fair test of any policy which may be suggested, and that the policy which comes the nearest to meeting all of them will be the best for the city to follow.

1. *The Method of Granting Franchises now in Vogue.*

The street railways of Cleveland are operated under franchises granted by the city Council, subject to the limitations of statutes¹ and ordinances.² The general

¹ For statutes governing street railway grants in Cleveland, see Appendix B.

² All references to ordinances are made from Revised Ordinances of City of Cleveland, 1890.

statutory authority of the council during the whole period of original grants includes the power to grant permission for the construction of street railways, and to describe the terms and conditions upon and the manner in which such roads should be constructed and operated. These grants were, however, limited to twenty-five years, renewable only at expiration, and contingent upon the written consent of the owners of a majority of the frontage on streets to be occupied by the railways.

There has long been a statutory provision¹ compelling the council, in case of application for a new franchise, to advertise the application for three weeks, to call for bids for constructing the proposed line, and to grant the franchise to the company agreeing to carry passengers at the lowest rate of fare. This statute, however, has as yet been of no practical effect in Cleveland, there having been no new grants since its enactment. The statutes concerning extensions² require that they be granted only on condition of no extra charge for the additional haul, and that the extension expire with the original grant. Chief among all the statutes upon the subject however is that, already referred to, passed by the last Legislature,³ which grants to the council, provided the two companies consolidate, the power to extend their grants for a period of fifty years from the passage of the act. This statute also provides for a revision of the agreement as to rates of fare, transfers, percentage of receipts, etc., at the end of the twentieth and of the

¹ Rev. Stat., Sec. 2502. Appendix B, pp. 357-58.

² Rev. Stat., Sec. 2505. Appendix B, p. 358.

³ Rev. Stat., Sec. 2505 d. Appendix B, pp. 360-61.

thirty-fifth year. There is also a provision¹ that no council can release a company subsequently to its grant from any obligation or liability imposed by the terms of the grant or a renewal of it. As the general policy of the Council for years has been to exercise all the power granted to it, there will probably be an attempt to avail itself of this latest provision. At present, the most valuable statutory provisions actually in force are those which give to the council full power to dictate methods of construction and manner of operation. These make it possible for the council, if so disposed, to dictate pretty completely the quality of service rendered.

2. Limitations upon Franchises by Ordinances.

The limitations imposed by the city through ordinances, were in some respects more marked in 1859 than they now are. An ordinance drawn as a preliminary to the granting of the first franchises imposed a rather elaborate system of rules under which the lines were to be operated. Chief among these were the limitation of all grants to twenty years (although the statute permitted twenty-five years), and the requirement of periodical statements of names of stock-holders, and amounts of receipts, expenditures, and earnings. The latter feature was one of the first to become obsolete; but the twenty-year limit was adhered to in the case of all the original grants. The limitations actually imposed,—and which are practically all repetitions of the statutes,—may be summed up under three heads:

¹ Rev. Stat., Sec. 2505. Appendix B, p. 358.

1. *Construction*.—The city dictates gauge and style of rails.¹ All electrical equipment is subject to the approval of the city engineer.²

2. *Service*.—General Service: Companies must run cars of approved pattern, with all modern improvements for the comfort and convenience of passengers; number of cars to be dictated by the Council;³ all cars to be properly heated.⁴ Special Services: All repairs of pavement between tracks necessitated by laying or repairing sewers, etc., to be made or paid for by the railway companies.⁵ Companies must sprinkle their part of streets that are sprinkled at the expense of property owners.⁶ Companies must keep their tracks clear of snow and ice, and cause it to be evenly distributed over remainder of the street. Companies shall also keep cross-walks clean.⁷

3. *Compensation*.—Companies shall pave⁸ between tracks of paved streets, sixteen feet for double tracks, and seven feet for single tracks.⁹ Companies shall pay an annual license fee of ten dollars per car.¹⁰

In addition to these limitations, there should be men-

¹ Rev. Ord. 1890, Sec. 980.

² Ordinance of June 23, 1890.

³ Rev. Ord. 1890, Sec. 982.

⁴ Rev. Ord. 1890, Sec. 1009.

⁵ Rev. Ord. 1890, Sec. 981.

⁶ Rev. Ord. 1890, Sec. 982.

⁷ Rev. Ord. 1890, Sec. 990.

⁸ It would be proper to put the requirement to pave under some other head than Compensation; but it is generally so treated in discussion of the general question of compensation, especially by the companies themselves.

⁹ Rev. Ord. 1890, Sec. 981.

¹⁰ Rev. Ord. 1890, Sec. 994.

tioned the special limitations which the Council has made in the case of the renewals granted to the East Cleveland Company¹ and the Woodland Avenue Company,² in 1879, and also in the extension granted to the Brooklyn Company,³ in 1883. In these it was expressly provided that the Council "reserves to itself the right to hereafter increase or diminish the rate of fare, as it may deem justifiable and expedient." With the exception of these special reservations, however, it will be observed that the limitations imposed by the city upon street railway grants have remained substantially the same during the whole period of our street railway history, although the traffic has increased many fold, and the grants have become exceedingly valuable.

3. *The System of Renewals.*

The statute covering renewals provides that cities of the first and the second grade of the first class, (which means Cincinnati and Cleveland), "may renew any such grant at its expiration upon such conditions as may be considered conducive to the public interest."⁴ In conformity with this statute, the Council in 1879 renewed the grants of the East Cleveland and Woodland Avenue companies, for the full legal period of twenty-five years. The terms of the renewal were the same as those of the original grant, with the exception of the reservation

¹ Rev. Ord. of Cleveland, 1890, p. 722, Sec. 6.

² Rev. Ord. of Cleveland, 1890, p. 744, Sec. 6.

³ Rev. Ord. of Cleveland, 1890, p. 773, Sec. 7.

⁴ Rev. Statutes of Ohio, Sec. 2501. See Appendix B.

above noted, of the right to reduce fares. Only one other franchise was permitted to approach its expiration period before renewal was obtained,—that of the West Side Company. This franchise was renewed June 5, 1882, to take effect at the expiration of the original grant, (Feb. 10, 1883). The reservation of the right to reduce fares was not made in this case, the grant being practically identical in terms with that of twenty years before. Nor was it made in the case of any other renewal since that time. Shortly after the East Cleveland Company was compelled to accept the reservation in the case of its Euclid Avenue line, it applied to the Council for the extension and renewal of its Garden Street grant, which would not legally expire until Jan. 14, 1888. The Council granted the renewal to take effect immediately for a period of twenty-five years, and thus inaugurated the custom of renewing grants regardless of their date of expiration, and in flat violation of the clear expression of the statute. In 1885, the St. Clair Street franchise, having five years yet to run, and the Superior Street grant, having nine years to run, were both renewed for the full legal period of twenty-five years. During the same year, the Brooklyn grant, having four years to run, was also renewed. In 1888, the East Cleveland grant, with sixteen years yet to run, and the South Side, with six years, were renewed. And in 1889, the Broadway & Newburgh franchise was renewed, four years before legal expiration. Thus it appears that seven of the nine original grants have been renewed contrary to the express declaration of the statute.

In only one of these cases has the validity of these renewals been tested at law. Unfortunately for all concerned, this was the weakest of all the cases, the grant being the least valuable and the circumstances least favorable to a decision on the real question at issue. In the case of the *State vs. East Cleveland Railroad Company*, the Garden Street renewal of March 22, 1880, was attacked, chiefly on the ground that it was contrary to the express provision of the statute concerning renewals. The circuit court held¹ that: "It has not been shown by the allegations of this petition, by the arguments of counsel, or by any considerations which have been suggested to us, that in any way the public interest is sacrificed by the grant of this renewal to the street railroad company. But on the contrary hand it would seem from the situation, so far as it is shown by the plaintiff's petition, that the public interest must be promoted by allowing the renewal, rather than to refuse such a renewal." This proposition the court supported by the fact that the ordinance which granted the renewal provided for an extension of the line which would secure to its patrons a longer haul without any additional fare. The court went on to say, "We should be very unwilling to render a judgment ousting the company of this franchise when it is obviously to the interest of the public that it should be held by the company, unless we are compelled to do so by the strict rules of law." "It is obvious that in giving construction to a statute of this kind, such a construction should if possible be given

¹ Vol. 6, Ohio Circuit Court Rep., p. 318.

as will promote the public interests, if such a construction will not in any way be an injury to private interests."

This decision has been cited as a precedent establishing the validity of all renewals made without reference to date of expiration. It will, however, be evident upon the most casual reading, that it gives very weak ground for such a view. The court seemed to hold that the extension of the line without any increase in the rate of fare was a consideration given by the company for the renewal. That the extension was such a concession by the company was not shown, and in the absence of its being shown, the extension was rather a favor granted by the Council to the company than the contrary. As to the increased haul without increase of fare, the statute covering extensions rendered it impossible to do otherwise; it is one of the prime conditions to an extension that no increase of fare shall be charged over it.¹ The court seemed to hold, further, that it was 'obviously to the public interest' that the grant should be held by that particular company,—a proposition which might be open to disproof of a conclusive nature. But, be that as it may, there are other renewals,—the St. Clair, Superior, Brooklyn, and Broadway,—in which there was no sort of consideration, and which could be shown to have been given contrary to the public interest, which the court made the criterion of its judgment in the Garden Street case. These grants are still open to vigorous attack and probable overthrow. If, on the con-

¹ Rev. Stat., Sec. 2505. App. B, p. 358.

trary, it should be further decided that any grant of renewal is valid regardless of its date of expiration, it will be in the power of a single council to extend every franchise in the city for the full period allowed by law. A single corrupt council, elected at a time when citizens were apathetic or distracted by other matters, could sell out in a night more than a score of efficient councils could save during their whole term.

However the question of validity may be decided, the simple fact is, that up to this time all the original grants have been renewed at or before expiration, without any additional consideration, save in the cases of the East Cleveland Woodland, and Brooklyn grants. And even in these cases, the Council has never availed itself, or given the public the benefit, of a right fairly conceded. The twenty-five year limit upon grants has been rendered ineffectual.

4. The System of Extensions.

Coupled with the system of renewals, which has indefinitely lengthened the life of all franchises, has been a system of extensions¹ which has served to increase their extent without any noteworthy gain to the city. Grants which might very properly have been treated as new, and offered to the best bidder in open competition, under the statute providing for such cases,² have been given, without competition or compensation to existing lines as extensions. Thus, the Payne Avenue line, a natural

¹ Statute covering Extensions. Sec. 2505, App. B, p. 358.

² Rev. Stat., Sec. 2502. App. B, p. 357.

competitor of the Superior, was granted to the Superior as an extension. In like manner, the Cedar Avenue and Wade Park extensions of the Euclid Avenue line; while the Scoville Avenue line was granted as an extension of the Brooklyn line across the river. So, too, the Lorain and Detroit street grants were tacked on to the West Side franchise. All of these lines should have been built under new grants regularly given to the best bidder for them. As it is, the general plan of the city, and the situation of existing lines are such¹ that all competition can be absolutely kept out by this method of extensions. By means of combined renewals and extensions, the existing companies have been able to control all street railway privileges, keep out competition and prevent the public from getting any return whatever from the lines.

All the good legislation, state and municipal, on the subject of street railway grants, has been rendered useless by these two methods of renewal and extension. The antiquated horse-car grants of thirty or forty years ago are by these indefinitely expanded and perpetuated, regardless of the vast increase in value present and future. The effect of this upon the returns receivable by the city from its lines may be indicated by the fact that a new company could build and equip lines in every respect equal to those in existence for a sum not much in excess of one-fourth of the sum upon which the existing companies are paying interest or dividends.²

¹ See map.

² For estimated cost of replacing all existing lines, electrically, see Appendix D.

These companies are paying interest or dividends upon more than fifteen millions of dollars in excess of their actual investment. If their franchises were permitted to expire, they would be compelled to bid for new ones against companies which could afford to pay handsomely for the privileges now represented by difference between the sum actually invested and the sum issued in stock or borrowed on bonds. Add to this fact the additional one, that failure to secure a renewal would involve a depreciation of from fifty to eighty per cent. of the investment of existing companies. This loss also is escaped by securing renewals, before the expiration of their grants, and so avoiding competition on the basis of the actual cost of rendering the service.

5. *The Consolidation Movement.*

As we have already indicated, there was a perceptible movement in the direction of consolidation, beginning as early as 1885. The movement culminated in the general consolidation which took place in 1893. This last great consolidation was the first to have any marked effect upon the street railway problem. Under a provision of the revised statutes, consolidated lines must give transfers over the entire length of the lines consolidated. In a consolidation so general as this, involving lines so situated in relation to each other (see map) the result of a general transfer system over the consolidated lines practically made it possible to go from any part of the city to any other on a single fare. In Cleveland all main lines excepting the Wilson Avenue

cross town line (which is operated jointly by the consolidated companies) radiate from the Public Square. A transfer at or near the Public Square will therefore be good for any line operated by the consolidated company granting it. Transfers on the Cross-town line on Willson Avenue are good for all lines intersected by it; but the passenger on this line is limited to a single transfer, —if coming to it on a transfer, he cannot get one from it to another line. This limitation, not made in the case of other transfers, is the most serious defect of the present transfer system.

The chief result of the consolidation, so far as the public is concerned, has been to give the city exceptionally good service on all lines, and a transfer system of great value. With the consolidation came a much higher grade of management. The lines are now uniformly organized and directed. The directorate of the companies is exceptionally able. Another advantage has come in the light which has been thrown upon the real value of the franchises held by the companies. With these franchises scattered among five companies, operating all sorts of lines with varying degrees of efficiency and profit, it was practically impossible to learn what their value was. With the uniform management and common chest of the consolidated companies, the problem has been greatly simplified. We now have two strong, well-managed companies to deal with, and a fairly complete knowledge of the affairs of either will enable us to get some idea of those of the other.

The chief disadvantage of the consolidation, so far as

the solution of the street railway problem is concerned, lies in the fact that it has brought together a combination of men whose commercial and political power is practically unlimited. Representing as they do, with their associates, the managers of both party 'machines,' it makes little difference which party is in power, so far as gaining their ends is concerned. And this power extends beyond municipal into State matters as well. Legislatures as well as councils are made the tools of these corporations. The fifty-year franchise bill was almost as much a party measure as the election of the United States Senator who championed it. The same forces which made him senator made this bill a law. How much farther the program can be carried out remains to be seen.

On the whole, it may be said that the attitude of the city towards the companies has thus far been liberal in the extreme. The companies appear to have received everything they desired, at little or no cost to themselves. They have enjoyed, or will have, for periods varying from thirty-six to fifty-four years, the street railway privileges of a prosperous and rapidly growing city, at very slight cost and under very few actual restrictions. The city has seldom attempted to exercise many of its undoubted rights in enforcing services of a desirable kind, and has for seventeen years refrained from exercising in any way its right to reduce fares on two of the best lines in the city. The paving of a sixteen-foot strip on paved streets, and the annual license fee of ten dollars per car, are the only concessions worth mentioning which the city has actually enforced.

IV. RESULTS ATTAINED UNDER THE FRANCHISE SYSTEM.

Having presented the facts in regard to the method and results of the franchise system as hitherto pursued in Cleveland, it may be well to note their bearing upon those phases of the street railway problem which we noted at the outset.

In the matter of service, we believe that the present system leaves nothing to be desired, so far as legal regulation and restriction can go. If the street railway service is poor, it is the fault of the city authorities, for they have the power, under statutes and ordinances, to remedy the situation as they see fit. Any complaint against the quality of the service rendered ought not to be charged to the franchise system; it does not belong there. As a matter of fact, the service is in most respects good, as street railway service generally goes. Moreover, the reservation made in the renewal grants of 1879 and in the Scoville Avenue grant of 1883, puts it into the hands of the Council to experiment with lower fares on six of the best lines in the city. Three-cent fares can be tried immediately on the Euclid Avenue, Wade Park, Cedar Avenue, Scoville Avenue, Woodland Avenue, Brooklyn, and possibly, by transfer, the West Side lines. This is all that the most ardent partisan could ask of lower fares. Without making a single change, or taking a single risk, the city of Cleveland can immediately inaugurate a most thorough and searching investigation of the feasibility of lower fares on a variety of lines. By this means it may further gain

a complete and trustworthy knowledge of the actual cost of street railway service. By pressing fares down to the point where the companies will resist and produce their books rather than submit, the city may obtain that reliable knowledge which it ought to have before proceeding to grant any more franchises.

In the matter of a return for privileges granted, the results of the franchise system thus far have been very small. It is true that the city does obtain something in the way of paving and a few thousand annually by way of license fees, but it cannot be pretended that these are in any sense a substantial return for the privileges enjoyed. Nor is there any reason to hope that we can make any great improvement in this respect while existing grants remain in force. The amount of the license fees is fixed by these grants, and there does not appear any other way by which the city may come in for a direct share of the profits from the lines. But the moment a franchise is permitted to expire, the city will be in a position to dictate, under a new franchise, such terms as it sees fit in regard to a direct return for that grant. Our failure to get such returns thus far is due to no inherent fault of the franchise system.

When we approach the question of corruption in the award of franchises, it must be admitted that the system has thus far put an immense premium upon all sorts of jobbery and corruption. The street railway interest has been all-powerful in the control of political machines. It has not only secured, apparently for the mere asking, the most valuable privileges which the city Council

could bestow, and it has also escaped the performance of many obligations which the State has compelled the Council to make a condition of its grants. It has prevented the enforcement of nearly every law which it has not cared to obey. And now it has an enormous inducement to corrupt a majority of the Council in order to obtain the most valuable grant ever put into the hands of that body to bestow. All this it has been enabled and encouraged to do under the present system, which offers to unscrupulous men both the motive and the power to corrupt the city government.

In favor of the franchise system we can say that it has made good service legally possible. Against it we must say that it has also made possible the award of valuable grants through corrupt means without adequate return. The problems of securing adequate return for the use of the city's property in the streets, and the checking of corruption in connection with the administration of that property, are yet to be solved. Whether they can be solved under any form of the franchise system is doubted by many. We may therefore, after a discussion of the value of existing franchises, proceed to a discussion of the different methods by which a solution may be sought.

V. THE VALUE OF EXISTING FRANCHISES.

1. *On the Basis of Investment Claimed by the Companies.*

In its report to "American Street Railway Investments," as well as to the bond houses handling its bonds, the Cleveland Electric Railway Company states that it has "common stock authorized and issued, \$12,000,000; shares fully paid up and non-assessable; par value, \$100 a share." Its authorized bonded debt is \$3,500,000, of which \$2,749,000 has been issued. It reports a mileage of ninety-six single track miles in the city, and ten miles of suburban track; the former number is somewhat too high and the latter has been increased during the present year. A careful estimate shows eighty-five miles in the city and fifteen miles outside. Its capital stock is therefore very close to \$120,000 per single track mile, and its bonded debt about \$27,500, making an aggregate of \$147,500. As there may be some method of calculating the mileage so as to get a larger result, we may allow a total single track mileage of one hundred and five miles. This would give us an aggregate capital and bonded indebtedness of about \$140,000 per single track mile.

The Cleveland City Railway Company reports an authorized capital stock of \$8,000,000, of which, according to the latest reports, \$7,600,000 has been issued. Its authorized bonded debt is \$2,500,000, and the amount actually issued is very close to \$2,200,000. It reports a total single track mileage of eighty-four miles. The

map shows only about seventy miles. Allowing an estimate of seventy-five miles, which seems more than fair, we have a trifle over \$100,000 of capital and a trifle less than \$30,000 of bonded debt per single track mile, making a total of \$130,000 per single track mile.

In its private reports to the investment houses selling its bonds, the Cleveland Electric Railway Company reports a much smaller amount of paid-up capital. These reports declare that over \$7,000,000 has been actually invested in the lines, and emphasize "the unusually large margin in the actual cash investment in the plant, over and above the bond issue." In view of the fact that many street railways are paid for almost entirely out of the proceeds of their bonds, this last statement is not without weight, although it may seem to come strangely from a corporation which professes to have a paid-up capital stock of \$12,000,000. Seven millions represents the extreme claim of the company as to its bona fide investment, and of this sum the bonds constitute almost forty per cent., leaving sixty per cent. to be represented by capital stock. But when we examine what is meant by an "actual cash investment of over \$7,000,000," we shall find that this does not necessarily mean that the lines are worth that sum,—it may mean the entire sum spent upon the line from the beginning of its history to this moment. And this sum may include vast sums which should long ago have been written off for depreciation. But even accepting this sum as the amount actually invested, we still have less than \$67,000 of actual investment to show for \$140,000

of capital and bonded debt, per single track mile. Deducting the amount of the bonds from the amount invested, we have only \$4,251,000, of investment to show for \$12,000,000 of capital stock "fully paid up."

We have found no authoritative statement by the Cleveland City Railway Company as to the amount which it claims to have invested. Allowing the same average per mile as is claimed by the Cleveland Electric, with a good extra allowance for ten miles of cable track, we should reach a total of about \$5,250,000. The aggregate capital stock and bonded debt issued is \$9,800,000. Deducting from the supposed claim for investment the bonded debt of \$2,200,000, we should still have \$3,050,000 of actual investment to represent the \$7,600,000 of capital stock issued.

Even more interesting, perhaps, than the statements in regard to the amounts invested, are those in regard to earnings, since these are probably exact. For the Cleveland Electric Company, (the constituent companies up to May 29, 1893, and the consolidated company since that time), they are as follows:

	Gross Receipts.	Operating Expenses.	Interest Charges.	Gross Earnings.	Net Earnings.
1892	\$1,324,504	\$ 955,626		\$368,878	
1893	1,351,000	937,518	\$137,450		\$275,932
1894	1,366,000	805,000	137,450		363,550
1895	1,503,000	981,220	137,450		381,950
1896 To Nov. 1 .	1,370,200	increase of \$132,700 over same period in 1895.			
1896 Estimated	1,650,000	1,040,000	140,000		470,000

It will be observed that 1894, the first full year of the Cleveland Electric Railway Company's business, showed a marked decrease in gross receipts. This is explained by the hard times, which were at their worst during that

year. It will also be observed that at the same time the operating expenses were reduced from \$937,618 to \$805,000, a truly remarkable showing on its face. This marked reduction was attributed primarily to the increased efficiency in management resulting from consolidation. The showing for 1895, however, dealt a severe blow to this idea. It showed operating expenses to have reached the enormous sum of \$984,220, a far larger sum than that of 1892 before consolidation. The most probable explanation of this great increase is, that it was due chiefly to the effort to make a phenomenal showing for the preceding year. Expenditures were probably kept at the lowest possible point during 1894, or altogether deferred, and unusual claims may have come to swell the increase. The normal increase in gross earnings, in a year when the gross receipts actually fell off \$45,000, even under the better management of the consolidated company, could not have reached \$50,000. So good a year as 1895, on the other hand, should have shown a gain of at least \$100,000 in gross earnings. As a matter of fact, the gross earnings of 1894, in the face of a deficit of \$45,000 in gross receipts, made the astounding gain of \$87,598; while 1895, with an increase of \$197,620 in gross receipts, showed an increase in gross earnings of only \$18,421. The secret of this apparent anomaly appears when we note the percentage of gross receipts which went to operating expenses. In 1892, the year before consolidation, 72.1 per cent. of the gross receipts of the companies afterwards merged into the Cleveland Electric, went for operating expenses. In

1893, (the consolidation went into effect on May 29) the percentage was reduced to 69.4 per cent. In 1894 it was only 61.1 per cent., while in 1895 it was 65.4 per cent. 61.6 per cent. in 1894 was too small. Sixty-five per cent. would have allowed \$848,000 for operating expenses, leaving \$457,000 for gross earnings, which would have been more nearly right. Sixty-three per cent. in 1895 would have been a very fair showing, and this would have allowed \$947,280 for operating expenses, and \$556,340 for gross earnings. Should the operating expenses in 1896 show a reduction to sixty per cent., the gross earnings will amount to \$660,000. The company has reached the point where an increase in traffic does not involve a corresponding increase in investment and operating expenses. This is shown by the fact that, while under consolidation the gross receipts have increased \$300,000 over 1893, the operating expenses have increased only \$100,000, *i. e.*, two-thirds of the increase in traffic has gone to earnings. The percentage of operating expenses, now somewhere between sixty and sixty-five per cent., should steadily decrease for some time to come, while the normal gain in gross earnings,—now not far from five per cent. per annum—should gradually increase.

On the basis of sixty-three per cent. of the gross earnings for operating expenses for the present year, we should have \$610,000 gross earnings. Deducting from this the interest on the \$2,749,000 of bonds outstanding, (\$137,450), the Cleveland Electric Co. will have \$473,050 net earnings. On the \$4,251,000 claimed to be ac-

tually invested in the lines, over and above the amount realized from bonds, this would permit a dividend of ten per cent, and leave a surplus of \$47,950 in the treasury. Were the earnings never to exceed the present amount, therefore, the investment would be a good one on the basis of the largest claim made by this company. But as a matter of fact—and this is the important point in regard to franchises in any growing city,—the earnings will continue to increase greatly, and this increase will go very largely to the increase of dividends. From the figures already given, it is apparent that while there is a steady increase of five per cent. annually in the volume of business done, there is at the same time a steady decrease in the cost of doing the business. If, therefore, we treat the franchises held by this company as having been of no value until this year, and estimate their value from this time until their expiration purely on the basis of a prospective increase in earnings, over and above the amount necessary to pay ten per cent. on all that the company claims to have invested, that value will easily run into the hundreds of thousands of dollars. If the city of Cleveland, in other words, could secure an agreement with the Cleveland Electric Railway Company by which the city should receive all earnings over and above the amount necessary to pay the interest on all outstanding bonds, and ten per cent. on all the capital claimed to be invested, the city would receive nearly fifty thousand dollars this year, nearly one hundred thousand dollars the year following and so on until the end of the franchise periods. And this on the basis of the present investment claimed by the company.

For the Cleveland City Railway Company, there are no official statements available for the period before and during consolidation. Since January, 1894, the official figures are as follows :

	Gross Receipts.	Operating Expenses.	Gross Earnings.	Interest Charges.	Net Earnings.
1894	\$ 923,551	\$87,438	\$336,113	\$131,569	\$234,544
1895	1,060,229	601,457	458,772	109,116	349,656
1896 To Nov. 1 .	946,000,	increase over same months in 1895, \$73,000.			
1896 Estimated	1,150,000	655,000	495,000	110,000	385,000

The percentage of operating expenses in 1894 was 63.6 per cent., and the following year saw it reduced to 56.7 per cent.,—a most excellent showing, though accounted for in part by the lower cost of operating by cable, and the more uniformly good earnings on all parts of the system. The rate of increase in gross earnings during 1895 and 1896 was rather better on the Cleveland Electric than on this system, however. Allowing a slightly higher percentage of gross receipts for operating expenses than that of last year, the probable earnings of this system will not be far from \$495,000 gross, or \$385,000 net. On the basis of \$3,000,000 actually invested, over and above bonded indebtedness, this would permit a ten per cent. dividend this year with a surplus of \$85,000. And, to apply the same test as in the former case, if the city had an arrangement by which it was to receive all earnings in excess of ten per cent. on the investment claimed, plus interest on the bonds actually issued, it would receive this year more than eighty thousand dollars from this line, and a steadily increasing amount during the remaining years of the grants.

It may be suggested that this calculation makes no

allowance for the redemption of bonds or the refunding of the capital stock in case of failure to obtain new grants. It may fairly be answered that the property given in security for the bonds ought to be sufficient to redeem them in any event, and that the stock-holder who has been receiving ten per cent dividends for a long period of years, has already been insured against the loss of his principal. A two per cent sinking fund for twenty-five years—the legal franchise period—will replace the principal. After setting aside that amount, the investor would still have an eight per cent investment. But it may still further be suggested that there is no good reason why the present holders of grants should not be able and willing to make such terms as the city asks for new grants. They are in a position of advantage and could easily under-bid all outside concerns. The very fact that they have so long enjoyed these grants without cost ought to enable them to offer better terms than anybody else when new grants are offered to the highest bidder.

2.—*Value of Existing Franchises on the Basis of the Cost of Replacing the Lines.*

But the real question at issue when it is proposed to grant new franchises, or renew old ones, is, not what the lines have cost, but what they can be replaced for. Wherever competition enters to fix the price of a service, the plant necessary to render it is worth, not what it cost, but what it can be replaced for. And so it would be if the city were in a position

to open these street railway grants to competition, and gain the advantage of an entirely new arrangement. This advantage the city has been deprived of thus far by premature grants. Long before grants expired they have been renewed, the result being that we are still upon the same basis, with a few notable exceptions, as in the original grants. And the great end to be gained by the companies in a fifty-year grant at the present time is to perpetuate this state of things, and prevent the city from attaining again the advantage by which in 1879 it was able to force the concession of the right to reduce fares. Being still on the old basis, we are constantly reminded of the amounts which these companies claim to have spent or lost during the whole period of their history, regardless of the fact that all of their grants are now very profitable and will steadily increase in value. These grants were originally for twenty years. A renewal of them was an entirely new matter, and the recipients of the original grants had no good right to expect further favors in that direction. The only true basis for calculating the value of a grant, either original or renewal, is the cost of furnishing the service at the time of the grant. Thus, in estimating the value of the franchises renewed in 1888-89, we have a right to consider, not what had been spent upon the lines, but what the lines could then be built for. So, too, if the question arises at this time, whether the proposed fifty-year grant shall be given, and under what terms, it should be very strongly insisted that *the true basis of calculation is the actual value of the lines at this moment, i. e., the amount for which they can be replaced.*

Too much emphasis cannot be laid upon this point, for it is the key to the whole situation. If the companies can get an extension on the basis of their alleged investment, instead of upon the basis of the present value of their plant, it will mean a difference of millions of dollars. The combined capital and bonded indebtedness of the companies amounts to more than twenty-five million dollars. The companies claim to have invested at least half of that sum. In case of a fifty-year grant without reference to the amount which should be recognized as the value of the lines, the companies could at least demand recognition of the latter,—in case of a contest later,—and would stand some chance of securing legal recognition of the former if the question came into court. But the present plant can be replaced by an electric system equal in every respect to the one now in operation for less than seven millions of dollars.¹ If we subtract seven millions from the sum claimed to be actually invested, we get a difference of more than five millions, which represents the minimum difference between a renewal on the old basis and a grant on a new one. If a fifty-year grant is given on the old basis, the companies must be allowed dividends on that basis. And when the time comes, at the end of twenty years, to make a readjustment of fares under the fifty-year grant, that basis must still hold good. So, too, at the end of the thirty-fifth year. A recognition of that amount as the basis of calculation will simply amount to a gift outright of at least five millions of dollars to

¹ See Appendix D, giving figures in detail.

the street railway companies,—not to mention the possibility of a larger claim being established on the basis of the capital stock and bonded debt at the present time. And that gift will represent the present value of the city's rights in the streets, which rights will have been given away.

This one fact reveals a sufficient motive to account for the determination of the companies to secure the fifty-year grant at all hazards. There are many other considerations which we shall indicate later on, but for the present this alone accounts for much that has occurred and will soon occur in connection with these street railway grants.

Taking seven millions as the cost of replacing the lines, we can easily calculate what a new company, or the old companies on a new basis, could afford to pay for their grants. The gross receipts of all the lines in the city this year will probably be in excess of \$2,800,000. The existing companies have more than five millions of bonds actually issued. A new company floating the same amount of bonds,—as it could easily do,—at five per cent interest, would have only two millions to invest in the shape of capital stock. The interest on the bonds would amount to \$250,000, annually. On this year's business, the net earnings being \$1,100,000, \$850,000 would be left with which to pay dividends. After paying a dividend of ten per cent on an actual investment of \$2,000,000, there would be a surplus of \$650,000 from which to make payment for its franchises. And this \$650,000 would come pretty near representing the fair profits of the other party in the concern,—the

city, which furnishes the right of way. It would seem a moderate statement to say that a new company could have afforded to pay a half million dollars for the franchises of the city of Cleveland *for this year alone*. The same would be true of the present companies if they were competing for the same grants in the open market.

This interesting result is vitiated for the present, however, by the simple fact that the city will not for some years to come be in a position to make new grants in open competition. The present grants must expire before the city can enjoy the advantage of a new arrangement. With the companies it has been different; they have been able to arrange a new deal in the shape of a renewal at almost any time. The present attempt to get a fifty-year renewal covering the whole city, is only greater in degree than the attempts which have been successful in time past. Yet it would seem that the advantage of an entirely new arrangement is so great that the city ought to hold out for it, even at great inconvenience. Nor should it be forgotten that the present value, though great, is trifling compared with what the future promises. The steady, rapid growth of the city; the inevitable decrease in operating expenses as compared with receipts; and the certainty of marked improvements in motive power, all argue strongly for the importance of future values in a consideration of franchises. But at this very moment, the difference between a new grant and the proposed renewal of the old ones, is the income from at least five millions of dollars, which in one case would go to the companies, and in the other might go to the city.

VI. THE DIFFICULTIES OF MUNICIPAL OWNERSHIP.

We have already enumerated,—under the heads of good service, a fair return for grants, and the elimination of corruption from the award of grants—the essential objects to be gained by a thoroughly good street railway policy. But, for the popular mind, the one desideratum in such a policy is the sharing by the public in the profits of the street railway business. The particular form which this share should take varies with the interests of those advocating it. Some would have it all applied to lowering fares; others would prefer a percentage of gross receipts paid directly into the city treasury for the lightening of taxes or the securing of improvements otherwise unavailable; still others would secure the increase of wages paid to employes on the lines; and not a few would like to have all these things at once. But the underlying notion,—that the companies are earning large profits out of public property,—and the general demand,—that the public shall have a share of these profits,—are common to nearly all the complaints made and reforms proposed. The financial argument is the one which appeals to most people. Yet the elements of good service and the elimination of corruption cannot safely be left out of any wise policy; these, as well as the financial aspect of the question, must be aimed at in the sober consideration of the city's policy in regard to street railways.

There are three distinct methods which the city may employ in its efforts to secure the best solution of the

street railway problem. It may grant franchises, under which companies undertake to equip and operate the lines, upon such conditions as the city sees fit to impose upon its grants. It may purchase the lines with a view to leasing them to operating companies. It may purchase them with a view to operating them on its own account. These three methods we may briefly designate as the franchise, lease, and city management methods. Let us proceed to a discussion of their relative merits in this case.

I. *Purchase with a View to Leasing.*

The advocate of city ownership under either the lease or city management method, undertakes to show that the city can best solve its street railway problems in that particular way; while the advocate of the franchise system urges his method as the one most suited to the case. It is at once apparent that the advocates of city ownership in general may stand upon double ground; they may argue from either the lease or city management standpoint, as suits them best. The advocate of the franchise system must make a case against both phases of city ownership. It will be well therefore to note the relation of each of these phases to the franchise system.

The difference between the operation of street railways by the city, and their operation by companies, is obvious, and suffices to distinguish clearly between the city management and the franchise methods. But when we examine the method of buying the lines and then leas-

ing them to companies, we find that it is in principle the same as the franchise system. For, when the city grants a franchise, it gives to a company for a valuable consideration (certain service at certain rates, together with returns of various sorts, according to the value of the grant), the right to use certain of its property in the streets for a time. And when the city makes a lease of street railway property, it grants to a company for a valuable consideration (usually a fixed money return, as well as certain services) the right to use certain of its property in the streets, plus some tracks and rolling stock thereon. In the latter case the city has simply added to the amount of the property leased. The franchise may be described as a lease of a part of the streets without railway equipment; and the lease may be described as a franchise granting the use of part of the streets plus some railway equipment. In both cases the principle is the same, the only difference being that the amount of property is greater in one case than in the other.

This identity of principle deserves careful attention, for it is fundamental in its bearing upon the whole argument for city ownership with a view to leasing. Having once recognized this principle, any argument for city ownership with a view to leasing must be made upon special grounds. These special grounds are commonly declared to exist in the fact that the city has already granted its most valuable franchises, and that it will be many years before it will have the opportunity of making better ones. Those who advance this argu-

ment are thus reduced at the outset to an admission that the advantage which their method is intended to gain is merely temporary ; that it exists only because the city has for a time parted with its rights in the streets, and that it will cease to exist as soon as existing franchises expire and the city regains its rights. The advocates of this method must therefore show that the rights granted in existing franchises are so valuable as to justify the city in expending millions to regain them, in the face of the fact that in less than twenty years they will all have come to an end.

Of course the first question involved in any discussion of immediate city ownership is : at what price, if at all, could the city get the lines ? It may well be doubted whether as long as the companies perform their part of the contract,—which they can very easily do,—the city could force them to sell. Their franchises are contracts regularly and legally made, and the courts must protect the holders of them. And even if the city could by any means compel the companies to sell, it would have to pay handsomely for what it got by the transaction. It would have to be treated as an investor trying to get hold of valuable property, and be compelled to pay for it accordingly. The price must include a large allowance for the value of unexpired franchises, as well as a valuation of the property on the basis of what it has cost the companies, rather than what it could be replaced for. The price, we may feel sure, would not be far from fifteen millions, inasmuch as the companies claim an actual investment of more than twelve millions.

This would be an investment in street railways such as no city has ever made. And it would be made under the most unfavorable conditions, both legally and financially. The argument based upon the experience of cities which have bought and leased railway property is therefore insufficient and inapplicable in this case.

Still another factor would play a very important part in any scheme of city ownership. It is the amount of interest which the city would have to pay on the money spent in purchasing the lines. Those cities which have spent comparatively small sums in street railway property, (Glasgow had only \$1,700,000 invested while its property was under lease, and has less than \$3,000,000 now, while Toronto paid only \$1,400,000 for the lines which it leased), have enjoyed the full advantage of a low rate of interest; and this has been a considerable element in the good showing made by Glasgow. But what rate of interest would a city like Cleveland have to pay on a loan of fifteen millions, additional to an existing large bonded debt? Under the five per cent. limit, formerly fixed by the legislature, the bonded debt was actually about six millions; under the recently authorized seven per cent. limit, it will exceed nine millions. The purchase of the lines at fifteen millions would swell the city's debt to more than twenty millions. It is a grave question what rate of interest the city would have to pay on such a loan.

Assuming that the city could borrow the whole fifteen millions at five per cent, the annual interest charge would be \$750,000. The gross earnings this year will

be about \$1,100,000 which would leave a margin of \$350,000 for net earnings. Out of this sum would have to be allowed the amount received by the operating company for its services, and the losses by depreciation. But at the outset there would be a difference of at least eight millions of dollars between the purchase price of the lines and their actual present value. This sum would have to be made good during the years in which the existing grants would run, inasmuch as the value of the new grants would be calculable upon the basis of the then present value of the lines. The average duration of existing grants is about fourteen years. The city would have, therefore, to make good during those years the amount which it had to pay in excess of the actual value of the lines, as well as all losses through the ordinary causes. This consideration alone practically destroys the financial argument in favor of purchase with a view to leasing.

The weakness of this method appears still further when we examine the possibilities of improvement by means of leases. In the matter of service, we have already found that the city has absolute legal power to make the service what it should be. No lease could give the city more power in that direction. Nor is it likely that there would be less corruption in granting a lease which included, with the use of the streets, the management of property worth millions of dollars. If no council can be elected to make a good franchise, there is small chance of making a good lease. From whatever standpoint we view the lease method, its ad-

vantages are only temporary, and expire with the expiration of existing grants.

2. *City Ownership with a View to City Management.*

In the proposition to have the city buy the lines with a view to operating them, we come fairly to the question of city versus corporate management. The advocates of city ownership with a view to leasing are usually, in this country at least, under the disadvantage of a tacit admission that city management is not efficient or trustworthy. That admission would invalidate any argument in favor of city ownership in any form, for the simple reason that if we assume municipal corruption, any change that we might make in the direction of city ownership would inevitably make things worse than they now are. Thus the advocate of the leasing method is defeated at the very outset by his tacit assumption of municipal rottenness. The advocate of municipal management escapes at least a part of that disadvantage. He takes issue squarely with the present system of corporate management, and affirms that it should be superseded by complete municipal management. He admits that there is corruption in the award of franchises, but affirms that that corruption can be removed by doing away with the franchises. When there are no valuable privileges to be had, he maintains that there will be no powerful organizations to corrupt the city in order to get them. He further affirms that cities are entirely capable of managing such enterprises, and that there is no good reason why street railroads should not be as well man-

aged by the city as the mail service is by the general government. Now and then we find an advocate of municipal management who believes that the city ought to assume the management of street railways in order to force a reform in municipal affairs. But the majority of those who favor this method are moved by the desire to have the city receive a larger financial return from the railways than it now receives. The strongest argument for them is the financial one, for they hope that, in spite of any inefficiency or corruption which there may be in the city control of the lines, the net financial result will still be more favorable than any which could be obtained from franchises.

It might be objected on theoretical grounds that if there is corruption under the present system there would be more under one which added to the income of the city several millions a year, and to its pay-rolls several thousands of men. It might be urged that, in the effort to escape the street car magnate, we should be putting ourselves under the control of the political boss; that we should be accumulating the material out of which this gentleman might construct a political machine vastly more powerful and demoralizing than any street railway combination. It might also be shown that the postoffice is not to be cited in evidence upon the street railway problem; that in the former the management is pretty effectually separated from local influences, and the grade of ability required is a barrier against the appointment of the lower class of political hangers-on; while the latter would be subject to all the strain of lo-

cal political 'pull' and would not be protected against demoralization by a high standard of required ability. We might, on the basis of facts known and admitted by all men outside of the political rings, make an argument against city management which would establish the fact of its inherent danger and impracticability. We shall content ourselves, however, with a few comparisons of the actual efficiency and cost of city management with that of the street railways as now managed. From these comparisons we think it will appear that the only argument in favor of city ownership which enlists serious support, the financial one, cannot be sustained.

The efficiency and cost of any form of management may be fairly tested by the items of supplies and labor. The former includes the charges for fuel, material for repairs, and other supplies necessary in the operation of such a plant as those under consideration. The latter covers the charges for services, excepting official salaries. Any material reduction in operating expenses would have to come along one or both of these lines, and upon these we may very fairly compare the two methods of management,—public and private.

In the matter of supplies we can make no direct comparisons; but we know that their amount and cost are chiefly determined by the quality of the management. For there is probably no more sensitive test of efficient management than this very thing. Skill in buying and economy in using supplies very largely determines their cost. Success in this department of management requires qualities of the very highest order,—skill, vigi-

lance, honesty. The lack of any of these qualities may throw the balance on the wrong side of the ledger. Applying these tests to city management it is certainly found wanting. There is no reason to believe that officials possessing and exercising these qualities can be secured under any system of city management which we have yet tried. In so far as skill is concerned, the brevity of official terms, as well as the character of the officials chosen, renders it practically impossible. Within five years Cleveland has had at the head of each of its city departments three or more men. In very few cases were these men fitted for the places they held, and in no case did any of them have an opportunity to become fit for his place. Skillful management has in general been simply impossible. On the other hand, the street car lines have been managed by men who have grown up to their positions, or had exceptional opportunities to fit themselves for their work. They are in general administered by men who have served a long apprenticeship before attaining a high official position. If experience counts for anything in the matter of skill, these officers are skilled men.

As for vigilance, the lack of skill makes it very hard for any city official to be really vigilant. The skill and vigilance which have been the ground of promotion in the service of the companies have counted for little or nothing in the service of the city. Every political office is primarily regarded as a means to further political ends, and good service has seldom been one of those ends. In the case of the officials of the company there has been

more at stake. Its gains have been their gains; its losses their losses. The city official has served an impersonal something which seems neither to appreciate gains nor to suffer under losses. Under the companies, officers hold positions; under the city, men hold 'office'. The first is an opportunity to do something; the second is a chance to get something. They are not twenty men in the City Hall who are not getting from twenty to two hundred per cent. more pay than any company would pay them for the same kind of service. And, what is worse, the city is paying such prices for far less efficient service than any good company would tolerate. There are some exceptions; but the rule is inefficiency, if we judge of efficiency by the standards which the business world is obliged to adopt. The city pays more for its services, gets less, and must put up with a poorer quality, than any good business house. The possibility of efficiency of management in the important matter of supplies is therefore woefully small under city management.

When we turn to the cost of labor as an index of the cost of city management, we find a situation that is, if possible, less promising in the matter of street railway operation, than that of management. About seventy per cent of the operating expenses of these companies goes to pay labor. What would the city pay for the same labor? We need hardly be reminded that one of the arguments often advanced in favor of city ownership is, that it would increase the wages and shorten the hours of employes. This is undoubtedly true. The whole logic of past experience is in its favor. The tendency

has been and is in the direction of higher wages for city employes than is paid for like service by corporations. If the city bought the street railway lines and undertook to operate them, there would be an increase in wages, and it would come even if the service could not be improved, nor fares lowered, nor a surplus paid into the city treasury. There is every reason to believe this. Consider the classes of city employes most closely corresponding to the street railway employes, the policemen and firemen. The policemen in Cleveland receive a thousand dollars a year, with excellent chances of promotion to eleven or twelve hundred, and the certainty of retirement on half pay at the expiration of twenty years of service. The firemen receive nine hundred and sixty dollars a year, with good prospects of promotion to eleven hundred and fifty. They also are sure of their half-pay pension after twenty years of service. Now the work on the beat is less arduous, exacting, and unpleasant than that on the line, while the fireman's lot is much preferable to that of the motor-man or conductor. The intelligence required of the street railway employe is fully equal, also, to that of the city employe. But the street-car man gets twenty cents an hour for his work, and is 'docked' for every hour he loses. He has neither promotion nor pension to look forward to, and his wages cannot average much over six hundred dollars a year.

It may be remembered that the police and firemen were not always so well off; but they have not been in politics for nothing. Commissioners and legislators

elected through their aid have wrought great improvement in their condition. It would be the same with the street car men if they were in the employ of the city. If two hundred and fifty firemen can secure the increase of their salaries through political action, could not two thousand street railway men do as much? So far as the value of their service is concerned, street railway men have as good a 'right' to a thousand dollars a year as policemen have. And the whole history of municipal politics,—certainly in Cleveland,—goes to show that they would get it. Having gained their increase in wages, the profits of operation would suffer seriously. Had the street railway employes been paid during this year at the rate of policemen, or of the city employes performing similar services, the gross earnings of the companies would have been reduced by more than half a million dollars. Had the city purchased the lines at fifteen millions, paid five per cent. on its bonds, and paid its street railway employes at the same rates as its other employes, there would have been a deficit of between two and three hundred thousand dollars in the street railway account.

It is clear that, without taking into account the possibilities of corruption, without presupposing intentional dishonesty on the part of city officials, it is impossible under present methods of city government and management to gain any financial advantage through city ownership of street railways. Under present conditions we should obtain neither the efficiency of management nor the cheapness of labor which are absolutely neces-

sary to make the lines a source of revenue to the city. Until we have succeeded in introducing into our city management those principles and methods which are essential to the success of any business enterprise, the logic of the situation is entirely against any scheme of city management of our street railways. In proof of this, beyond what has already been said, it will suffice to mention the single fact that the most rigorous reform bill ever passed in regard to this city (the so-called 'Federal Plan' law), compels the city authorities to call in private parties to do any piece of work costing more than two hundred and fifty dollars. Beyond that point the city cannot be trusted in the performance of its own work.

In view of these facts, it seems hardly necessary to add to the simple statements here made any argument as to the danger of opening up to the politicians the rich plunder of the street car lines. Neither does it seem necessary to elaborate upon the inevitable inferiority of service which would be rendered by servants who owed their positions to political 'pull.' With the failure of the financial argument falls the only point which secures to the advocate of the method of city management of the lines a hearing.

To sum up, then, on the basis of our three original points, we may say that the method of city ownership with a view to operation offers no solution of the service problem; that on this point it is inferior to either of the other methods. We may also say that the possibility of a solution of the financial problem,—the securing of an

adequate return for the use of the city's property in the streets,—is destroyed, in the first instance by the price which the city would have to pay for the lines at forced sale, and in the second place by the inefficiency of city management and the excessive cost of city labor. And on the third point,—the corruption in connection with street railways,—we must say that it is so serious as to make it dangerous and impracticable at present, even though it might fully solve the other parts of the problem. Whatever the future may bring forth in Cleveland city management, there is at present no sufficient ground for trusting to it what may be done by others. For neither in efficiency nor honesty is it yet equal to the tasks already imposed upon it.

VII. THE FRANCHISE SYSTEM AND ITS POSSIBILITIES.

1. *Under Present Conditions.*

Having condemned all the methods open to the city in its treatment of the street railway problem, it may fairly be asked whether the problem seems capable of any solution? If the franchise system has failed, and the others would fail, what solution is left to us?

In the presence of the political conditions already described, it might be doubted whether any solution is possible under present conditions. If a man will not protect his own rights; if he will permit his interests to be neglected or brushed aside, it is a hard matter to devise any way by which he may be protected in the enjoyment of those rights and interests. And if a city is likewise indifferent to its rights; if the people are so little interested in the disposal of their property that they will take no steps to assert the one and defend the other, it is of little use to devise methods by which they may be secure in the enjoyment of what they so little value. But if we may be justified in assuming that the city will come to a realizing sense of its rights and obligations, the discussion has some value. Upon this assumption, I believe that it can be shown that the franchise system is, on the whole, the best method open to the city. For this belief I give a few reasons.

In a discussion of any method and the results obtained under it, the thing to be kept in mind is, the extent to which the method has produced the results; and also the extent to which bad results may follow from the

poor use of methods in themselves good. And the question in all movements for reform is, not so much whether something is out of gear, as whether the remedy sought to be prescribed will cure the evil. It is not enough to cry, "There is corruption; let us have reform." We must be reasonably sure that our method of reform will put an end to the abuse. And, so, we believe, in a discussion of the street railway problem of a city like Cleveland, we ought to be at great pains to know, not only the evil, but also its cause and remedy. We must ask whether the evils now existing are due to the present system; and, if so, whether their remedy demands a change of principle or of detail only. If we will put ourselves into this attitude, I think we shall find that many of the evils now complained of can be remedied under the present system, as far as they can be remedied at all.

Thus, in the matter of service, we have already seen that the franchise system provides fully and adequately for every legitimate need. Under no system could we secure a fuller assurance of good service, provided we ourselves insist upon the fulfilment of the contract. This is especially true in regard to lower fares upon several of the lines. The Council has full power to reduce fares on the Euclid Avenue, Cedar, Wade Park, Woodland Avenue, and Brooklyn (including Scoville). The experiment of lower fares can here be tried fully and fairly without risk or difficulty.

In the matter of a return for the privileges granted, no system can now do much direct good. The act of

folly has been committed. The deed of gift has been made, and the squandered property can not be regained without paying for it. Yet, even here, there is a possibility of improvement through the illegality of some of the grants. The renewals granted to the Superior, St. Clair, Brooklyn, and Broadway Companies, are of doubtful validity. A vigorous assault might break them down, and result in their being set aside. Practically every grant in the city has a weak spot in it. The Broadway renewal is of doubtful validity; the Brooklyn renewal is likewise weak, and the Scoville Avenue grant saddled upon it the right of the Council to reduce fares. The East Cleveland (excepting Central Avenue) is also open to a reduction of fares; the Woodland avenue grant is in the same list. The St. Clair and Superior grants were renewed before expiration. The West Side grant is tied up to the Woodland, which expires in seven years, and has a cheap fare provision; and the Kinsman Street grant expired two years ago. A strong fight by the city on these points might enable it, before the expiration of the grants, to secure some return for them. But in any case, these grants will begin to expire soon. In a little more than seven years, the Woodland grant will expire. Nine years more will see the end of the West Side grant. Thirteen years will terminate the Brooklyn, St. Clair, and Superior grants; while the East Cleveland and the South Side are good for seventeen years, and the Broadway for nearly eighteen. The great discrepancies between the dates of expiration for the different lines is also a source of weakness to the consolidated companies, of which

the city might take advantage. By availing itself of these advantages and then waiting, if need be, for the expiration of the grants, the city would be able to secure the best arrangement possible under any system. The property of the companies will be of little value in the event of a failure to obtain a new grant, and they will be well able to offer better terms for a new franchise than any other company could. The policy of renewing franchises long before their expiration, and so depriving the city of many of its natural advantages, is no essential part of the franchise system and should be abolished at once.

As for corruption in the award of franchises, it is no more a part of this system than it would be of any system that politics could touch. This matter of corruption is a disease which cannot be cured by scattering it, nor restricted by giving it richer soil to flourish in. It must be attacked where it is and cured there. Under proper limitations, it can be better dealt with under the franchise system than any other.

The fatal defect of the franchise system thus far has been the power, assumed by Council, to renew grants at any time during their existence, under any terms it pleases. Until this view is repudiated by the courts or cured by a new statute, it will be possible for any one Council in a period of twenty years to give away all the franchises in the city for the full legal period. Under the express wording of the statute to the contrary, this evil ought never to have arisen; but now that it has arisen, it should be dealt with promptly.

2. Under the Proposed Fifty-Year Grant.

The possibilities of a solution of the problem under the new fifty-year law are contingent upon several points. If the city Council can put itself in a position to determine what would be fair terms under such a grant, and is disposed to give the grant only under such terms ; and if the Council can make a contract with the new consolidated company under which the old evil of indiscriminate renewals will be effectually escaped, the result might be really favorable to the city. But if the Council should fail upon any of these points, the city would be in a worse position than at present. The advantage of fixing new terms would be largely lost if the Council did not know what terms ought to be fixed. And the only real merit of the law,—the provision for a revision of the terms at the end of the twentieth and the thirty-fifth years,—would be useless if the present view of renewals is valid. A grant for fifty years can be renewed without regard to its date of expiration, as easily as any other. All that would be necessary, therefore, to deprive the public of the advantage of these revisions would be to secure a renewal before the period came around, and so postpone it indefinitely. If the renewals of the St. Clair, Superior, Brooklyn and Broadway lines are valid, any Council could renew the fifty-year grant. Without a provision which renders such renewal impossible, the whole advantage of the best feature in the law would be lost to the public.

But granting the possibility of securing favorable terms and providing against the renewal evil, the fifty-

year grant would have at least one distinct advantage. It would take the street railway question out of politics to a considerable extent. Any arrangement which can be made definite for a given period would bring this important gain.

3. *Comparative Advantages under Present Grants, and under the Fifty-Year Arrangement.*

We have seen that, under the present grants, the city is in a position to make an experiment with lower fares on a number of representative lines, to gain some reliable knowledge as to the actual cost of street railway service; and, possibly, by attacking grants of doubtful validity, to force substantial concessions in other direction from the holders of these grants. We have seen that the present grants begin to expire in seven years and will all have come to an end in less than eighteen years. We thus find the city in a position of great advantage, by reason of which it may learn what it should receive from its grants at present, and proceed to enforce its reasonable demands. With the expiration of existing grants, it may enter upon a series of arrangements with the companies by which it will receive all that is justly due it, so that when the last of the existing grants expires it will have approached a safe and wise solution of its street railway problem without any of the risks or dangers of city ownership.

Under the present grants, the city may gain the advantage resulting from the expiration of the grants. Not so, under a fifty-year arrangement, if settled years be-

fore expiration of these grants. It cannot be expected that the companies will accept terms as favorable as could and would be made by a new company. They will not part with the value represented by their present grants. The terms of a new grant at the present time would have to be fixed with reference to an investment far in excess of the actual value of the lines; and this amount now fixed would continue to be the basis even under the revisions at the end of the twentieth and the thirty-fifth year,—if such revision were not evaded by some new law. *The very essence of the fifty-year grant is that it takes the companies where it finds them, recognizes their present claims as to investment, and substitutes for their medley of grants,—good, bad and indifferent, expiring at periods anywhere from seven to eighteen years distant,—one uniform grant for all lines, good until April 22, 1946.* The city is asked thus to give up all the advantages, natural and accidental, of its present position, cure all the defects of existing grants and give a new lease of life to an arrangement already antiquated. A system professed to represent more than twelve millions of actual investment is to be made the basis of a fifty-year arrangement, when at this very moment it is actually worth less than seven millions. What advantages does the fifty-year grant offer in return for such concessions?

Under the terms of the law as it stands,¹ it is provided that in return for a fifty-year extension of its grants, the company consolidating under the law shall give univer-

¹ Rev. Stat., Sec. 2505 d.

sal transfers from line to line going in the same general direction ; that the rates of fare for children shall not be in excess of the minimum charged on the separate routes prior to consolidation ; that it shall agree to "such other changes as to rates of fare and transfers as will make the terms and conditions applicable to all said lines satisfactory to said board of administration or legislative body (city council)"; that no increase of fare shall be allowed, nor any decrease of license fees or percentage tax on gross earnings now required to be paid. The only distinct gain absolutely secured under the terms of this law is a universal transfer system. But, as we have already noted, the present transfer system is practically universal. The gain resulting from a further extension of it would be comparatively slight. The car license fees, so carefully protected from decrease, amount to less than ten thousand dollars a year ; while "the percentage tax on gross earnings now required to be paid " is exactly nothing. The only possibility of improvement lies in the vague provision for "such other changes as to rates of fare and transfers as will make the terms and conditions applicable to all said roads or lines satisfactory " to the city Council. The Council has been very easily "satisfied " in recent years. Before any new grants are given, the Council needs some definite knowledge upon which to determine the value of those grants. By an immediate surrender of all its advantages and rights in the case, the city can gain very little and will give very much.

CONCLUSIONS.

In view of all the circumstances, the policy of the city in the matter of grants, should be a waiting one, until more light has been gained upon the possibilities under such grants. There is no good reason why the city should at this juncture make a disposition of the whole street railway problem which must hold good for a long period of years. On the contrary, there is a most excellent opportunity for working out under the present grants such results as may utterly change the character of the new grants when they must be made. The whole problem of lower fares can be thoroughly dealt with, and a vigorous campaign in favor of a better state of affairs in street railway matters will doubtless bring out many advantages not now clearly apparent. A few lines of action which are immediately open and should be entered upon at once, may here be suggested :

First. Let the Council proceed to reduce fares, under the reservations made with that end in view. Let the experiment be tried on all the lines open to it. If honestly prosecuted, it will throw more light upon the whole problem than any other one thing can do.

Second. Let the grants of doubtful validity be attacked in the courts, and let the case be made as strong as it should be, so that the court will have no recourse to considerations and theories which might have been shown to be invalid. If the courts sustain the present construction of the renewal law,

Third, let there be a strong effort to put a statute on

the books which will render it impossible to renew grants, except at stated periods, and under such safeguards as will prevent hasty or indiscriminate grants of valuable franchises.

Fourth. The fifty-year law should be repealed. It is dangerous at present, in that it offers a fearful inducement to blunders or corruption, or both. When the city is prepared to make such a grant as will be to its real and permanent advantage, it can secure such a law as may be necessary for the purpose. The present law was not enacted with reference to the city's advantage and is not likely to serve it.

Fifth. Let the law concerning extensions be so amended as to prevent the classing of whole lines, which should be open to competition, under that head.

Sixth. Let there be a law under which the city may require from those enjoying valuable grants such information as may be necessary to determine the value of those grants.

In closing, it may be said that too much emphasis cannot be laid upon the importance of a wise solution of this problem. The street railway, for good or evil, is most intimately connected with the city's life. Municipal purity, as well as municipal progress, is involved in the solution of this problem. The attempt to reach such a solution may offer to municipal loyalty and pride that stimulus which is so much needed. The effort to gain for the public benefit and use the ever increasing income from the use of the city's streets may summon into activity what abstract principles have failed to

arouse,—the determination to have an honest, efficient city government. And the fear inspired by the danger involved in a failure to reach a proper solution may arouse those who are unmoved by considerations of civic pride or gain. On the other hand, if the power of the corporations is suffered to increase, it may at last corrupt our political life at its very sources. Corrupt local government must in the end involve corrupt national government. We may hope that we shall eventually attain larger civic pride, deeper sense of civic responsibility, better city government. But between us and that great end lies the solution of this problem, at once typical in its character and large in its financial and political possibilities.

APPENDIX B.

PRINCIPAL OHIO STATUTES GOVERNING STREET RAILWAY GRANTS, ETC.

S. 2501. No corporation, individual, or individuals shall perform any work in the construction of a street railroad, until application for leave is made to the council in writing, and the council by ordinance shall have granted permission, and prescribed the terms and conditions upon, and the manner in which the road shall be constructed and operated, and the streets and alleys which shall be used and occupied therefor, and the council may renew any such grant at its expiration upon such conditions as may be considered conducive to the public interest.

S. 2502. Nothing mentioned in the next preceding section shall be done ; no ordinance or resolution shall be passed, and no action inviting proposals to construct and operate such railroad shall be taken by the council, except upon recommendation of the board of public works in cities having such a Board, and of the board of improvements in other municipalities having such a board ; and no ordinance for the purpose specified in the said preceding section shall be passed until public notice of the application therefor has been given by the clerk of the corporation in one or more of the daily papers, if there be such, and if not, then in one or more weekly papers published in the corporation, for the period of at least three consecutive weeks ; and no such grant as mentioned in said preceding section shall be made, except to the corporation, individual, or individuals, that will agree to carry passengers upon such proposed railroad at the lowest rates of fare¹, and shall have previously obtained the written consent of a majority of the property holders upon each street, or part thereof, on the line of the proposed street railroad, represented by the feet front of the property abutting on the several streets along which such road is proposed to be constructed ; provided, that no grant nor renewal of

¹ The phrase "lowest rates of fare" in this section was interpreted by the Supreme Court (29 O. S. 292) as not meaning "the lowest price of commutation tickets in packages."

any grant for the construction or operation of any street railroad, shall be valid for a greater period than twenty-five years from the date of such grant or renewal ; and after such grant or renewal of a grant is made, whether by special or general ordinance, the municipal corporation shall not, during the term of such grant or renewal, release the grantee from any obligation or liability imposed by the terms of such grant or renewal of a grant. (Mar. 20, 1884 ; 81 Ohio Laws, p. 66.)¹

S. 2503. Before any street railroad shall be constructed on any street less than thirty six feet in width, with a roadway of thirty-five feet or under, the council shall provide that the crown of the street shall be made a nearly flat uniform curve, from curb to curb, without dirched gutters, and in such manner as to give all wheeled vehicles the full use of the roadway up to the face of the curb, after the plan of the streets in the cities of Philadelphia and New York. And on any street, whenever the tracks of two street railroads or of a street railroad and a steam railroad cross each other at a convenient grade, the crossings shall be made of crossing-frogs of the most approved pattern and materials, and kept up and in repair at the joint expense of the companies owning said tracks. (Apr. 20, 1881 ; 78 v. 296).

S. 2504. (As amended Apr. 21, 1890. 87 v. 246) : The council may require any part or all of the track between the rails of any street railroad, constructed within the corporate limits, to be paved with gravel, bowlders, or the Nicholson or other wooden pavement, as may be deemed proper ; but without the corporate limits, paving between the rails with stone, bowlders, or the Nicholson or other wooden or asphaltic pavement shall not be required ; provided that in cities of the second grade of the first class (Cleveland) the council may require of any street railroad company to pave and keep in constant repair sixteen feet for a double track or seven feet for a single track, all of which pavement shall be of the same material as the balance of the street is paved with. (66 v. 217, sec. 414).

S. 2505. The council of any city or village may grant permission by ordinance to any corporation, individual, or company owning, or having the right to construct, any street railroad, to *extend* their track, subject to the provisions of sections 3437, 3438, 3439, 3440, 3441, 3442, and 3433, on any street or streets where the council may deem such

¹ This section was amended Apr. 24, 1892, (88 v. 389) to permit grant for fifty years in cities of the second grade of the second class, which does not affect Cleveland.

extensions beneficial to the public ; and when any such extension is made, the charge for carrying passengers on any street railroad so extended, and its connections made with any other road or roads, by consolidation under existing laws, shall not be increased by reason of such extension or consolidation. (Mar. 9, 1880; 77 v. 43).

S. 2505a. Any corporation or company organized for street railway purposes may lease or purchase any street railroad or street railroads, or railroad operated as a street railroad, by electric, cable, or other rapid transit motive power, or incline plane railroad or railroads, together with all the property, real, personal and mixed, and all the franchises, rights and privileges respecting the use and operation of such railroad or railroads situated or existing in whole or in part within this state, constructed and held by any other corporation or company, corporations or companies, the latter being hereby vested with power to let or sell upon such terms and conditions as may be agreed upon between the corporations or companies ; and any two or more of such corporations or companies may enter into any arrangements for their common benefit consistent with and calculated to promote the business for which they were created. No such lease or purchase shall be effected until a meeting of the stockholders of each of the companies has been called for that purpose by the directors thereof, on thirty (30) days notice to each stockholder, at such time and place and in such manner as is provided for usual meetings of the companies, and holders of at least two-thirds of the stock of each company, in person or by proxy at such meeting, or any properly adjourned meeting, assent thereto. Provided, that any stockholder who refuses to assent to such lease or sale, and signifies the same in writing to the lessee or purchaser within ninety days thereafter, shall be entitled to demand and receive compensation in the manner provided for the compensation of stockholders in sections 3302, 3303, and 3304 of the revised statutes ; and the said sections are adopted and made to be part of this section. And any such corporation or company may purchase and own all or any part of the capital stock of any such corporation or company in this or adjoining states, whose lines or authorized lines or road intersect or connect with the route or lines of the corporation or company, making such purchases. (Apr. 22, 1896).

S. 2505b Whenever the lines or authorized lines of road of any street railroad corporation or companies meet or intersect, or whenever

any such line of any street railroad corporation or company and that of any inclined plane railway or railroad company or corporation or any railroad operated by electricity or other means of rapid transit, may be conveniently connected, to be operated to mutual advantage, such corporations or companies or any two or more of them, are hereby authorized to consolidate themselves into a single corporation; or whenever any line of road of any street railroad company or corporation organized in this state is made, or is in process of construction to the boundary line of the state, or to any point either within or without the state, such corporation or company may consolidate its capital stock with the capital stock of any corporation or company, or corporations or companies, in an adjoining state, the line or lines of whose roads have been met, or are in process of construction to the same point or points, in the same manner and with the same effect as provided for the consolidation of railroad companies in sections 3381 to 3392 inclusive of the Revised Statutes, and any and all acts amendatory and supplementary to said sections, and each of them; and the said sections including those so amended and supplementary are adopted and made part of this section. (Apr. 22, 1896).

S. 2505d. Whenever it is proposed to bring any two or more lines of road within the control or ownership of one corporation or company under and in pursuance of either section 2505a, or 2505b, which roads are held and operated under grants providing different terms and conditions, it shall be competent for the board of administration in any city of the first grade of the first class (Cincinnati) and for the council or other legislative body of any other municipal corporation to agree with the corporation or company so acquiring control or ownership that such terms and conditions shall be and remain unchanged as they are in each of the grants under which said several lines of road are operated, on condition that said railroad company or companies shall provide or extend a system for transferring passengers from line to line going in the same general direction, and such other transfers as shall be satisfactory to said board of administration or council, or other legislative body; and provided, further, that no fare for children will be charged upon any of said routes in excess of the minimum fare for children over either of such separate routes prior to such consolidation or purchase; and provided further that for a continuous ride in the same general direction over the lines of such consolidated company, within any municipal corporation, no fare greater than five cents

shall be charged ; or, in lieu of the foregoing, it shall be competent in all such cases for the board of administration in any such city of the first grade of the first class, and for the council or other legislative body of any other municipal corporation to extend the time of each of said grants and franchises for such periods as, together with the unexpired term of such existing grant or franchises, shall not exceed the period of fifty years from and after the passage of this act ; provided, the company so acquiring control and ownership of said roads will agree to such changes and modifications in the existing terms and conditions of said grants or franchises, including motive power, extensions, changes and revisions of routes, and including also the above mentioned rates of fare for children, and transfer system, and such other changes as to rates of fare and transfers as will make the terms and conditions applicable to all said roads or lines satisfactory to said board of administration or legislative body ; and provided further, that no increase of fare shall be allowed in any case, and no decrease shall be allowed in any case, of car license fees or percentage tax on gross earnings now required to be paid. And provided further that the municipal corporation in which such street railroad is situated shall have the power at the end of twenty years from the passage of this act, and every fifteen years thereafter, to fix the rates of fare, car license fees, percentage tax on gross earnings, transfers, and all other terms and conditions on which such railroad is operated in said city. The said terms shall be fixed by the board of administration if there be such board, and if there be none then by the council or legislative body of the municipal corporation, and must be approved and confirmed in the manner which at the time may be required for their acts of such municipal corporation. Notice of the time and place when such regulations shall be fixed shall be given by public notice in two daily newspapers of general circulation in such city, and the hearing of the same shall be open and public, and the terms there fixed shall be equitable according to the then cost of carrying passengers. Should the parties not agree as to whether said terms are equitable, the same may be submitted to the adjudication of a court of competent jurisdiction in a suit brought by the company to enjoin the municipal corporation from enforcing the terms so fixed. (Apr. 22, 1896).

S. 3437. Street railways with single or double tracks, side tracks, and turn-outs, may be constructed or extended within or without, or partly within and partly without, any municipal corporation or unin-

corporated village ; and offices, depots and other necessary buildings for such railways may be constructed. (67 v. 105).

S. 3438. The right so to construct or extend such railway within or beyond the limits of a municipal corporation can be granted only by the council thereof, by ordinance, and the right to construct such railway within or beyond the limits of an unincorporated village can be granted only by the county commissioners, by order entered on their journal ; and after such grant or renewal of any grant shall have been made, whether by general or special ordinance, or by order of the county commissioners, neither the municipal corporation nor the county commissioners shall release the grantee from any obligations or liabilities imposed by the terms of said grant or renewal of a grant during the term for which said grant or renewal shall have been made. Provided, that no authority shall be given by such municipal or county authorities to occupy the track, whether single or double, or other structure, of any existing street railways for more than one-eighth of the entire distance between the termini of the route, as actually constructed, operated, and run over, of the company or individual to whom such grant is made ; except, however, in granting permission to extend existing routes in cities of the first, second and third grade of the first class, and first grade second class, such cities, and the companies owning such route, shall have the same rights and powers they have under the laws and contracts now existing ; and that no extension of any street railroad located wholly without any such city, or of any street railroad wherever located, which has been or shall be built in pursuance of a right obtained from any source or authority other than a municipal corporation, shall be made within the limits of such city, except as a new route, and subject to the previous sections, 2501 and 2502. (April 18, 1883 ; 80 v. 174).

S. 3439. No grant shall be made until there is produced to the council or the commissioners, as the case may be, the written consent of the owners of more than one-half of the feet front of the lots and lands abutting on the street or public way, along which it is proposed to construct such railway or extension thereof ; and the provisions of sections 2501, and of 2503 to 2505 inclusive, so far as they are applicable, shall be observed in all respects, whether the railway proposed is an extension of an old, or the granting of a new route ; provided, that this act shall not apply to any county containing a city of the second grade of the second class. (Apr. 18, 1883 ; 80 v. 175).

S. 3440. When the council or commissioners make such grant, the company or person to whom the grant is made may appropriate any property necessary therefor when the owner fails to waive his claim to damages by reason of the construction and operation of the railway. in counties containing a city of the second grade of the first class (Cleveland) the power to appropriate may be exercised as hereinbefore provided, for the purpose of constructing a street railway along a highway occupied by a turnpike or plank road company, when the person, persons, or company authorized to construct such street railway cannot agree with such turnpike or plank road company upon the terms and conditions upon which such turnpike unnecessarily interfere with the reasonable use of such highway by such turnpike or plank road company ; provided nothing herein contained shall affect the rights of the property owners to give or withhold their consent concerning the right of way for street railroads upon any street or road. (Apr. 16, 1892 ; 89 v. 349).

S. 3441. If the public road along which the railway is to be constructed is owned by a person or company, or is within the control or management of the board of public works or other public officer, such person, company, or officer may agree with the person or company constructing the railway as to the terms and conditions upon which the road may be occupied. (67 v. 10, sec. 1).

S. 3442. Providing form of proceedings in appropriation cases.

S. 3443. The council, or the commissioners, as the case may be, shall have the power to fix the terms and conditions upon which such railways may be constructed, operated, and consolidated. (67 v., sec. 1.; 66 v. 140, sec. 1).

3443a. Provides for watchman at street crossings where street railways are operated by electricity, cable, compressed air, or any other motive power other than horses or mules.

Act of Mar. 19, 1896, (H. B. 293). Requires from street railway companies annual reports of gross earnings, and provides for an excise tax of one-half of one per cent. thereon, this tax to go into the general fund of the state.

APPENDIX C.

GRANTS BY THE CITY COUNCIL TO THE STREET RAILWAY COMPANIES.

To the Broadway & Newburgh Street Railroad Company.

1873, Aug. 26. Original grant for twenty years ; double track in Broadway from intersection of Kinsman (Woodland Ave.), (G 6)¹ southeasterly to city limits (Union street J 8).

1874, July 14. Extension from intersection with Kinsman Street (Woodland Ave.) Railroad (G 6) northwesterly along Broadway to Ontario, to Public Square (F 5), around southwest side of square southwesterly to Superior, to Water (F 6).

1875, July 27. Extension on Broadway from Union (J 8) southeasterly to Mechanic (Miles Park street), (K 9).

1883, Oct. 16. Extension on Broadway from Mechanic (Miles Park street) southeasterly to Miles avenue (K 9).

1886, Sept. 24. Extension on Davis street, from Broadway (H 7) northerly to Kingsbury Run viaduct (H 6).

1886, Oct. 8. Extension northerly over Kingsbury Run viaduct (H 6).

1886, Dec. 17. Extension on Orange street from Broadway (G 6) southeasterly to Humboldt (H 6).

1887, Jan. 10. Extension on Humboldt from Orange street southerly to Kingsbury Run viaduct (H 6).

1887, Sept. 9. Extension on Petrie street (H 7) from Broadway south to Fleet (H 8), westerly to Independence (H 8) to Hugo, to Berle, to Sykora.

1889, July 1. Renewal for twenty-five years and permission to use electricity.

1889, Sept. 23. Extension on Fleet (H 8) east to Tod (J 8) south to Fremont (J 9), east to Brecksville road (Marcelline avenue), south to Harvard (J K 9), east to Woodland Hills avenue (K 9), north to Union (K 8), west to Broadway, (J 8).

1889, Oct. 21. Extension on Miles avenue (K 9) from Broadway east to city limits.

¹ All references are to map of Cleveland, Appendix A.

1890, July 7. Extension from Superior on Bank (F 5) north to St. Clair, west to Water, south to Superior.

1890, July 21. Extension from tracks on Broadway at Liberal street (G 6) east on Pittsburg (G H 6), and Kingsbury Run viaduct extension, to tracks on Humboldt street (H 6).

1893, May 29. This company became part of the Cleveland Electric Railway Company.

Grants to the Brooklyn Street Railroad Company.

1869, Dec. 7. Original grant for twenty years; Pearl street from center of Lorain (F 6), south to city limits, (Prame street F 8).

1881, May 16. Extension over tracks of West Side Street Railroad on Pearl from Lorain (F 6), north to viaduct and across viaduct.

1882, Apr. 6. Cross-track connection on Superior street (F 6).

1882, Nov. 6. Extension on Clark Avenue from Pearl (F 7) west to C. C. C. & I R. R. tracks (E 7).

1883, Mar. 12. Extension from east end of Viaduct (F 6) east to Woodland Cemetery (J 6) along Scoville Avenue. Council reserved 'the right to hereafter increase or diminish the rate of fare as it may deem justifiable and expedient.'

1884, Nov. 17. Extension on Willson Avenue from Scoville (H 6) south to Broadway (H 8).

1885, Jan. 26. Renewal of grant for twenty-five years.

1887, Nov. 14. Extension on Abbey from Lorain (F 6) east to Central viaduct, over viaduct; also in Jennings south to Fairfield (F 7) east to Pelton, to Professor (G 7), southeast to Jefferson, south-east to Starkweather.

1887, Sept. 9. Extension from Broadway and Willson (H 8) west through Hamm to Petrie, south to Huck (H 8), west to Athey, west to Independence, northwest to Hugo (H 8).

1889, Mar. 22. Right to use electricity.

1889, Aug. 19. Tracks in Diamond Park Alley (J 7).

1890, July 7. Joint extension from Bank, southwest to Water on St. Clair (F 5).

1886, July 16. Extension, jointly with East Cleveland, on Water, Lake and Bank (F 5).

1893, May 29. This company became a part of the Cleveland Electric Railway Company.

Grants to the Cleveland City Cable Railway Company.

This company was the result of a consolidation of the Superior Street Railroad Company and the St. Clair Street Railroad Company, which took place some time between July 1, 1889, and January 1, 1890. There is no record of any authority granted by Council for this consolidation.

1890, Jan. 13. Extension on St. Clair street, from Becker (J 3) northeast to Ansel; also on Superior, from E. Madison (J 4) east to city limits.

1890, Mar. 17. Extension across Doan (K 4) south into Wade Park. (This was prevented by the courts.)

1891, June 22. Extension, double track on Hough (K 5) to southerly side of same, across Ansel to easterly line.

1893, Jan. 16. Right to use electricity on any, or on parts, of lines or extensions.

1893, May 15. This company was authorized to consolidate with the Woodland Avenue & West Side Company, as part of the Cleveland City Railway Company.

Grants to the Cleveland City Railway Company. (Consisting of Superior, St. Clair, and Woodland Avenue & West Side.)

1893, May 15. Consolidation under above title authorized.

1893, July 3. Extension of double track on Erie from Superior northwest to St. Clair (F 5).

1893, July 17. Additional track on South Woodland (K 6) between Southern and Corwin streets; also double track extension from Corwin, southeast to Woodland Hills (K 7); grant to expire Jan. 16, 1910.

1893, Mar. 12. Extension on Ansel from Superior to city limits at St. Clair.

1894, Feb. 19. Joint extension on Willson, from Woodland (J 6) north to Lexington (J 5), and from Payne to northerly terminus; to expire July 1, 1914.

Grants to the Cleveland Electric Railway Company. (Composed of Broadway & Newburgh, East Cleveland, Brooklyn, and South Side Companies.)

1893, May 29. Consolidation of companies under above name authorized by resolution of the Council.

1893, July 17. Extension on Prospect from Erie (G 5) west to Ontario; extension on Seneca (F 5) from Superior to Lake, east to Ontario (F 5), to center of Public Square.

1894, Feb. 19. Joint extension on Willson from Scoville (J 6) north to Perkins (J 5), and from Hough (J 5) to northerly terminus of Willson (J 3); expire July 1, 1914.

1894, Apr. 30. Extension on Burton from Clark (E 8), south to city limits; double track; expire July 13, 1913.

1894, June 25. Extension, double track on Quincy (L 6) from present tracks west to Willson; abandoned New street; terminating at Quincy.

1895, Aug. 19. Extension on Broadway from Mills Avenue (K 9) southeast to Woodland Hills Avenue, and across Gates and McConnell.

1895, Oct. 21. Extension on Euclid from Carabelli Street (L 4) northeast to city limits; expire July 1, 1914.

Grants to the East Cleveland Railroad Company.

1859, Nov. 1. Original grant by resolution, for twenty years from Sept. 20, 1859; on Prospect from Erie (G 5) east to Willson (J 5) north to Euclid.

1860, July 31. Extension on Euclid from Willson (J 6) west to Case, over Case to Prospect (H 5); also on Euclid from Case to Hudson (Sterling Avenue), to Prospect.

1879, Sept. 15. Renewal for twenty five years. Council reserved right "to increase or diminish the rate of fare."

1882, Feb. 20. Extension from Prospect over Hayward to Cedar (H 5), east over Cedar to Fairmount (L 5); route to be changed from Hayward to Perry (G 5).

1883, Apr. 4. Extension on Euclid from Willson (J 6) east to Fairmount (L 5).¹

1884, July 21. Extension on Cedar from Fairmount (L 5) east to Doan Brook.

1886, Mar. 15. Extension on Euclid from Fairmount (L 5) east to city limits (near Rosedale L 5).²

¹ On Sept. 7, 1870, this company received from the village of East Cleveland a grant over this same territory.

² On Oct. 21, 1872, this company secured a grant from the village of East Cleveland for a line over this same territory for twenty-five years.

1886, July 16. Extension on Water, Lake and Bank (F 5).

1888, Feb. 24. Double track on Cedar from Perry (G 5) to Willson (J 5).

1888, July 13. Permission to use electricity east of Willson (J 6) on Euclid; and east of C. & P. R. R. on Cedar (J 5) to point 1500 feet from Fairmount (L 5); to be extended over entire line when required by Council. Renewal for twenty-five years on Main and Cedar lines.

1889, Apr. 12. Extension on Case from Euclid north to Perkins (H 5), east to Willson (J 5), north to Houth (J 5), east to Dunham (J 5), north to Wade Park Avenue (J 4), east to city limits (L 4).

1890, July 7. Joint extension on St. Clair from Bank to Water (F 5).

1893, May 29. This company became part of the Cleveland Electric Railway Company.

Grants to the East Cleveland Railroad Company for its Garden Street (Central Avenue) Branch.

1868, Jan. 14. Original grant by resolution of Council, for twenty years, on Brownell from Prospect southeast to Garden (G 5), on Garden east to Willson (J 6), including right to use the main East Cleveland from Prospect and Brownell (G 5) to its westerly terminus in Superior street (F 6).

1876, May 23. Extension on Garden east to Baden (J 6), south to Quincy, to New, to Garden.

1880, Mar. 1. Extension from Baden and Quincy (J 6) along Quincy east to Lincoln (K 6). Renewal for twenty-five years.

1885, Feb. 9. Extension from Quincy and Lincoln (K 6) along Quincy east to Woodland Hills (L 6).

1887, July 17. Extension on Garden from Baden (J 6) east to Lincoln (K 6).

1890, Mar. 10. Right to use electricity.

1891, Mar. 30. Additional track on Central from Willson (J 6) east to C. & P. R. R. (J 6).

1891, Apr. 20. Additional track on Quincy from New street (J 6) east to Woodland Hills (L 6), to connect with tracks on New street.

Grants to the Kinsman (Woodland Avenue) Street Railroad Company.

1859, Oct. 25. Original grant, by resolution of Council, for twenty years from Sept. 20, 1859, for single track line on Kinsman (Woodland Avenue) from Willson (J 6) northwest to Erie (G 6), northwest to Su-

perior, to east line of Public Square, around north side of Square to Superior, to Bank, to Wall, to Bath (Front).

1860, June 12. Abandoned route on Erie and Superior (G 5) around north side of Public Square; granted route from east line of Erie northwest along Kinsman (G 6), Pittsburgh, Ontario, (F 6) and Superior to west side of Square.

1860, June 26. Abandoned route on Bank and Wall; granted route on Superior from Bank to Water (F 6).

1879, Aug. 25. Renewal for twenty-five years from Sept. 20. Council reserved right to reduce fares.

1883, May 4. Extension on Woodland from C. & P. southeast to Corwin (K 6).

No grant from Willson to C. & P. R. R. on Woodland, on record.

1885, Feb. 16. This company was authorized to consolidate with the West Side Street Railway Company.

Grants to the South Side Street Railroad Company.

1874, June 16. Original grant for twenty years; from Seneca between Superior and Frankfort Place (F 5) southeast to Scranton, south to Jennings (F 6) to city limits (Aikin street F 8).

1875, Nov. 9. Extension on Fairfield from Jennings (F 7) east to Professor, to Jefferson.

1888, Oct. 5. Right to use electricity. Renewal for twenty-five years. Extension in Jennings from Holmden (F 8) north to central viaduct (F 6), over viaduct to connect with Brooklyn tracks at corner of Ohio and Central Place (G 6) to tracks at Woodland and Broadway.

1889, Feb. 1. Extension on Clark Avenue from Jennings (F 7) west to Pearl, along Pearl to city limits.

1889, Sept. 16. Extension, double track, in Seneca from Frankfort (F 5) to Scranton (F 6), south on Scranton to Vega (F 7).

1889, Oct. 21. Terminus changed from Vega to Clark.

1893, May 29. This company became part of the Cleveland Electric Railway Company.

Grants to the St. Clair Street Railroad Company.

1863, June 9. Original grant for twenty years, from west side of Public Square (F 5) to Superior, to north side of Square, around to Superior, to Erie, to St. Clair (F 5) east to Willson (J 5).

1869, Oct. 19. Extension on St. Clair from Case (H 4) east to Willson (J 4). Renewal for twenty years.

1877, Apr. 16. Extension on Ontario from St. Clair (F 5) south to north line of street bounding Public Square on the south. (This grant contains a reference to "that portion of the main line between Ontario and Water," but there is no record of such grant having been made).

1885, Jan. 5. Renewal for twenty-five years on St. Clair from Water to Becker (J 3).

1888, July 9. Extension over the East Cleveland Brooklyn Companies through Water and Superior (F 5) to Bank, to St. Clair.

1889, July 1. Authority to use cable.

During the latter part of 1889, this company was codsolidated with the Superior Street Railway Company to form the Cleveland City Cable Railway Company.

Grants to the Superior Street Railway Company.

1874, March 10. Original grant for twenty years, double track, Superior from Public Square to Willson (J 4).

1874, Sept. 1. Extension on Superior from Willson (J 4) east to East Madison.

1877, Feb. 19. Extension on Superior from east side of Public Square to west side of same.

1883, Aug. 13. Extension on Payne Avenue from Superior (G 5) east to Willson (J 4), on Willson to Lexington, to East Madison.

1885, Jan. 26. Renewal of grant for twenty-five years.

1885, Dec. 14. Extension of Payne Avenue line on East Madison (J 4) from Lexington to Hough (K 5), east to Ansel.

1888, July 27. Joint use of tracks in Superior from Public Square to Water.

1889, June 17. Right to use cable.

1889, July 1. Extension in Water Street from Superior (F 5) to Union Depot.

1889, date uncertain. This company was united by consolidation with the St. Clair Street Railroad Company, to form the Cleveland City Cable Railway Company.

Grants to the West Side Street Railway Company.

1863, Feb. 10. Amended May 5. Original grant, no specified time; Seneca from Superior south to Champlain (F 6), southwest to Vineyard (S, Water F 6), to Center, over C. C. C. & I. R. R. (F 6) Canal Bridge and Center Street Bridge, along Center west to Detroit (F 6), southwest to Kentucky (E 6), south to Harbor (E 7), south to Lorain, northeast to Pearl (F 7), north to Detroit (F 6).

1876, May 23. Six cent fare authorized; twenty tickets for a dollar.

1878, Oct. 21. Extension on Superior to Public Square.

1879, Feb. 24. Five cent fare.

1879, Mar. 17. Extension on Pearl from Detroit (F 6), south to Franklin, double track.

1879, June 2. Extension on Lorain from Pearl (F 6), southwest to Gordon (D 7).

1880, Jan. 26. Extension over Viaduct (F 6).

1880, Sept. 6. Extension on Detroit from Kentucky (E 6), west to city limits.

1882, Mar. 20. Extensions; additional track on Detroit between Pearl (F 6) and Kentucky (E 6); additional track on Pearl between Franklin (F 6) and Lorain; additional track on Lorain between Pearl (F 6) and Waverley (E 7).

1882, Apr. 1. Extension on Lorain from Gordon (D 7) to Chestnut Ridge.

1882, June 5. Renewal for twenty-five years from Feb. 5, 1883.

1882, Aug. 21. Extension in Kentucky from Woodbine (E 6) south to Bridge (E 7), on Bridge to intersection with present line.

1885, Feb. 16. Consolidation of this Company with the Woodland Avenue Company authorized.

Grants to the Woodland and West Side Street Railway Co.

1885, Feb. 16. Ordinance authorizing consolidation of the two companies above named.

1887, Apr. 8. Additional track in Franklin between Pearl (F 6) and Franklin Circle. Extension from Franklin Circle west to Kentucky (E 6).

1887, Aug 12. Extensions in Franklin from Kentucky to Waverley (E 7) south to Bridge.

1888, Feb. 24. Extension on Lorain from Pearl (F 6) to Abbey (F 7), to Jennings (F 7) north to Central Viaduct (F 6) to Central Place, to Market House (G 6); also in Jennings from Abbey (F 6) west to Willey (F 7), to Scranton, to city limits.

1888, July 9. Extension, loop around the Public Square.

1889, Mar. 22. Right to use electricity.

1889, Sept. 2. Extension on Bridge from Waverley (E 7) west to Gordon (D 7), north to Franklin (D 7) to intersection with Waverley.

1890, Jan. 6. Extension on Lorain from Bridge (D 7) southwest to Geib.

1891, Feb. 2. Extension on Lorain from Geib (D 7) to Henley (Wellington C 8).

1892, June 20. Additional track on Kinsman from Woodland (J 6) to city limits (K 7); expires Feb. 11, 1908.

1892, Aug. 1. Extension, double track, on Lorain from Henley (Wellington C 8) to city limits.

1892, Oct. 17. Additional track in Woodland Avenue from East Madison (K 6) east to switch track intersection of Woodland and Southern.

1893, May 15. Ordinance under which this Company became part of the Cleveland City Railway Company.

Grant to Woodland Hills Street Railroad Company.

1874, July 28. Grant for twenty years on Kinsman from Willson (J 6) southeast to C. & P. R. R.

This line was acquired by the Woodland Avenue Street Railroad Company, by purchase, in 1882.

There is no record of any renewal of the above grant, which expired July 28, 1894.

APPENDIX D.

ESTIMATED COST OF BUILDING AND EQUIPPING AN ELECTRIC STREET RAILWAY SYSTEM IN CLEVELAND.

160 miles single track, city construction, \$11,760 per mile .	\$1,881,600
20 miles of suburban track, \$11,221 per mile	224,420
160 miles overhead electric work, city construction, \$4,417	
per mile	706,720
20 miles overhead electric work, country construction, \$3,500	
per mile	70,000
Power houses, engines (10,000 H. P.), boilers, pumps, gen- erators, etc., complete	650,000
Motors, 440 at \$2,200 each	968,000
Trailers, 300 at \$1,000 each	300,000
Real estate and buildings, car houses, etc	450,000

PAVING.

91.5 miles common Medina stone, \$12,720 per single track mile	1,208,400
9.4 miles brick, \$8,448 per single track mile	79,412
9.4 miles dressed block stone, \$16,896 per single track mile,	158,822
69.7 miles, balance of system, boulder or other cheap pave- ment, estimated \$5,000 per mile	348,500
Total for system of 180 miles	\$6,974,403

Of these estimates, those on track and overhead electric work are taken from detailed bid on a line of the same kind. It will be observed that we have allowed a total mileage of 180 miles, which is in excess of the actual showing on the map. The estimate for motive power allows 6,000 H. P. (steam) for the Cleveland Electric, and 4,000 H. P. for the Cleveland City railway lines, which is entirely adequate. The allowance of \$300,000 for electric equipment and \$350,000 for the steam power complete, in the power houses is more than enough. The allowance of 440 motors is also generous; likewise that of 300 trailers, since the latter are being largely dispensed with. The allowance for real estate and car houses, though possibly less than that expended by existing lines, would be ample for present needs. The con-

consolidation rendered useless several large pieces of property of this sort. The estimates for paving are based upon the amounts and kinds which the present companies have actually laid, while the allowance of \$5,000 a mile on unpaved streets leaves a large margin.

These estimates are not based on an inventory of the property of the existing companies, since much of the latter could be replaced by much better at a lower cost. This is especially true of the power houses. But these estimates do cover a plant modern in every respect and fully equal to rendering the best of service.

APPENDIX E.

PROPERTY REPORTED FOR TAXATION, BY THE STREET RAILWAY COMPANIES, FOR 1896.

The Cleveland Electric Railway Company reported :

REALTY.

Situated in the City of Cleveland,	\$ 306,170 00
“ “ Collinwood, E. C.,	620 00
“ “ Newburgh Hamlet,	14,340 00
“ “ East Cleveland Village,	5,280 00
Total,	<u>\$ 326,410 00</u>

PERSONALITY.

Taxable in the City of Cleveland,	\$ 798,910 00
“ “ Collinwood, E. C.,	8,220 00
“ “ Newburgh Hamlet,	790 00
“ “ East Cleveland Township,	8,940 00
“ “ East Cleveland Village,	13,630 00
“ “ Brooklyn Township,	925 00
“ “ Brooklyn Village:	9,700 00
“ “ Euclid Township,	8,480 00
Total,	<u>\$ 849,595 00</u>

The Cleveland City Railway Company reported :

REALTY.

Situated in the City of Cleveland,	\$ 216,830 00
“ “ Lakewood Hamlet,	2,300 00
“ “ Glenville,	3,930 00
Total,	<u>\$ 223,060 00</u>

PERSONALITY.

Taxable in the City of Cleveland,	\$ 455,760 00
“ “ Lakewood Hamlet,	468 25
“ “ Glenville,	13,400 00
“ “ East Cleveland Township,	380 00
Total,	<u>470,008 25</u>
Grand Total for both Companies,	<u>\$ 1,869,073 25</u>

The rule for tax valuations in Cuyahoga County is, that 60% of the actual value of realty shall be listed for taxation. On this basis, the property reported by both companies would represent an aggregate value of \$3,115,120.00.

SUMMARY.

The capital stock of both companies is	\$20,000,000
Their authorized bonded debt is	6,000,000
<hr/>	
A total of	\$26,000,000
The <i>bona fide</i> investment of the companies is claimed to be over	\$12,000,000
The lines can be replaced with a first-class electric system for less than	\$ 7,000,000
The property actually reported for taxation amounts to .	\$ 1,869,073



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